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VOLUME 45 **FEBRUARY 1954** NUMBER 2

SLA Science-Technology Division

PHARMACEUTICAL SECTION ISSUE

FEATURING

Company-Wide Library Service

Jewell Maurice, Helen E. Loftus, Irene M. Strieby

Issuing a Pharmaceutical Abstract Bulletin

Winifred Sewell

British Libraries and the Fulbright Program

Walter A. Southern

Bibliographical Methods

Karl A. Baer

Lloyd Library

Corinne Miller Simons

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Indexed in Industrial Arts Index, Public Affairs Information Service, and Library Literature

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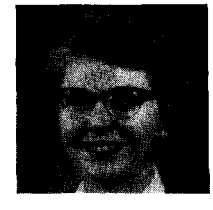

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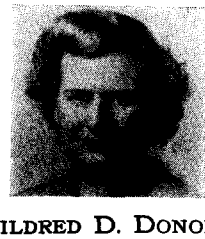

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PHARMACEUTICAL SECTION

INTRODUCTION

THE SCIENCE-TECHNOLOGY DIVISION is outstanding in SLA and in the library world because of the activities of its five Sections: Chemistry, Engineering, Petroleum, Pharmaceutical, and Public Utilities. Many useful projects are Division-wide, but the Sections engage in research which leads to valuable contributions to both the technical and library fields.

The Pharmaceutical Section, the youngest and among the smallest in the Division, was formally organized at the Chicago meeting in 1947. Its organization was the result of a chance meeting. Mildred Clark, Winifred Sewell and I attended a library meeting at the New York Academy of Medicine in February 1947. We found we had so many interests and problems in common that an organization in SLA was essential. Before the June meeting in Chicago we found twenty-two more pharmaceutical librarians who were equally interested. We were fortunate that our petition to become a Section of the Science-Technology Division was granted. We are proud today of our membership of over two hundred.

From the beginning the Section felt that projects worthwhile to the profession would improve our status as a Section and develop the interest and latent talents of the members. To this end a number of projects have been initiated and three have been successfully launched: Unlisted Drugs, Periodicals in Pharmaceutical Libraries, and COPNIP. In choosing our projects we have kept two points in mind: the use to which they can be put by pharmaceutical librarians and their value to the industry as a whole. We attribute our financial success to the fact that each of our publications has supplied a definite need in either or both of these fields.

We will be seven years old in June. We feel that we have built a firm foundation and that our future as members of SLA and the pharmaceutical world will be productive for all of us. ALBERTA L. BROWN

THE PHARMACEUTICAL SECTION was established in 1947 to facilitate the exchange of information vital to those working in this subject field, and to initiate and promote projects serving to further constructive gains in the pharmaceutical industry and in the library profession.

The pharmaceutical library is organized and equipped to meet the needs and requirements of the organization it serves. And while this library service is calculated to cover special interests and special matters, it is this approach, basic in its concept, which is known to all special librarians.

While this special Pharmaceutical Section issue of SPECIAL LIBRARIES brings into focus the activities and accomplishments of the Section, it should be noted that the material presented here is not intended exclusively for pharmaceutical librarians. The issue includes articles of general interest to special librarians.

The symposium on *Company-Wide Library Service*, presented by Jewell Maurice, Helen E. Loftus and Irene M. Strieby of the Eli Lilly Company, was an outstanding program feature of the SLA 44th Annual Convention in Toronto, Canada . . . *Problems of Issuing a Company Pharmaceutical Abstract Bulletin*, by Winifred Sewell of the Squibb Institute for Medical Research, was presented first at a meeting of New York Chapter's Science-Technology Group, and drew wide-spread interest . . . Karl A. Baer of the American Pharmaceutical Association offers *Bibligraphical Methods in the Biological Sciences*, a splendid paper which aroused favorable comment when presented at the SLA Convention in Toronto . . . Walter Southern of the Abbott Laboratories, now in London on a Fulbright Award, contributes *British Libraries and the Fulbright Program* . . . Of unusual interest, also, is the article by Mrs. Corinne M. Simons, of the world-famous Lloyd Library in Cincinnati, which describes the early beginnings of pharmacy in that region.

Space does not permit a complete listing of every one who contributed directly or indirectly to this issue. My sincere thanks to you who contributed so generously of your time and talen to make this issue a reality.

It is a privilege, as Chairman, to acclaim the loyalty, work, and success of the Pharmaceutical Section. May we continue to enhance the record of professional achievement portrayed in this issue of SPECIAL LIBRARIES. MARY C. DEVEREAUX

COMPANY-WIDE LIBRARY SERVICE*

JEWELL MAURICE, HELEN E. LOFTUS AND IRENE M. STRIEBY
Lilly Research Laboratories Library, Eli Lilly and Company
Indianapolis, Indiana

I. Scientific Information Service

DURING THE FIRST HALF of this century we have seen industrial library service grow from a few books scattered in laboratories and offices to carefully selected collections developed for one or more divisions of an organization. Depending upon the coverage desired, a technical library may serve only its scientific research staff or it may serve the entire personnel. An introductory resumé of the history of the Lilly Research Laboratories Library illustrates the growth of one such company-wide service.

Beginning with a small collection of pharmaceutical and medical books, first administered by a botanist in 1891, a centralized library, as far as one can determine, was not established until 1911 when it functioned as one of the five sub-divisions of the Scientific Department. Here it remained until 1934, when, with the completion of the Research Building, adequate space became available.

From the original collection of books, the library expanded until it now includes, not only the Main Library, but a business branch and several extensive departmental collections. The latter include those at the Lilly Clinic, Greenfield Laboratories, and the Kentucky Avenue Plant. Service is also planned for the Tippecanoe Laboratories when activated.

Just as significant as this physical expansion has been the change of emphasis on subject matter. Shift of interest from botanical drugs to the antibiotics and synthetic organic chemicals, as well as the evolution of new scientific fields, such as geriatrics, nuclear physics, and nutrition is clearly reflected in the library's holdings. Market analysis and quality control are but two of the interests which led to the establishment of the Library Business Service eight years ago.

The placement of a library in the organizational setup, as well as its internal structure, is most important. In this particular company, the library is an operating department with its Chief Librarian reporting to the Head of Research Administration. A library committee, consisting of one representative from each division, serves with the librarian as the liaison between the library and its clientele. The library proper is comprised of three functions, namely, Readers' Service, Technical Processes, and Business Service, each supervised by a librarian with subject specialization under the general direction of the Chief Librarian.

The function of the technical processing group is to make information available as quickly as possible. In this respect, the Main Library is responsible for ordering all printed material for the entire plant. Requisitions are processed and material ordered directly by the Order Assistant from agencies designated by the Chief Librarian. The Purchasing Department has recently authorized this system in order to expedite the acquisition of material.

When the various book collections

* Paper presented before the Science-Technology Division, Toronto, Canada, June 25, 1953, at the 44th Annual Convention of Special Libraries Association.

were centralized in 1911, a classification scheme was developed by a Lilly scientist. It provided a place for all types of books, applying both alphabetical and numerical notations. Since no detailed scheme has been developed for a pharmaceutical library, the schedule, developed to fit the specific company holdings, was revised and is still in use.

Books, periodicals, government documents, and some ephemera are cataloged for the Main Library, the Business Service, and departments throughout the organization. Few publications are analyzed, although subjects which are of special interest and difficult to locate, such as illustrations, good bibliographies, and select reviews, are noted. A greater number of analytics are made for the Library Business Service than for the Main Library as the literature in the former field is less well organized.

A union catalog has been established for the entire collection. Books located in the Library Business Service are so indicated by stamping LBS above the call number on the card. Materials located in various departments are noted by using colored catalog cards and penciling in location and name of individual who has the items. Maintaining control of departmental books has created quite a problem. To facilitate such supervision, a weekly list of employees leaving the company is checked so that an inventory of items charged to an individual can be made.

Company Archives are also administered by the staff and housed in a special room adjacent to the library quarters. A classification scheme for the Archives is under development so that it will be possible to include them logically in the library's schedule. This material must be used in the Archives Room where there is also a separate catalog which will eventually be duplicated and incorporated into the union catalog. Standard cataloging procedures are followed as nearly as possible.

A service which is not strictly a library procedure but which lends itself to library technique is indexing. The technical processing section is responsible for the detailed analysis of the abstract section of *Diabetes*, the official journal of the American Diabetes Association, and for seven medical publications issued by the company. Two of these are periodicals and are indexed annually, the remainder only when revised. It has been necessary to develop special techniques to handle indexing, especially for the cumulative five-year index for *Diabetes*.

In addition to binding the periodicals kept permanently in the collection, departmental binding is a further service offered. The library merely furnishes the man power required for the preparation and transmission to and from the bindery. The department in question is responsible for the cost involved. Pertinent to this are the library periodical exchange work, management of gifts, and the searching of various book lists for lacunae and out-of-print materials.

Since the assistant in charge of binding is constantly aware of new titles received by the library, she is responsible for maintaining a visible record of all serials, listing their call numbers, and stack location. A multilithed periodical list, which is kept up to date with supplements, is distributed to staff members in outlying departments. Back files of journals are being completed through the purchase of microfilms which are added to all periodical records.

One of the most difficult problems confronting the librarian is the provision of an index to the current periodical literature. An abstract service provides the most satisfactory solution to this problem, especially since a cumulated reference file is developed from the abstracts. This service is, by no means, an attempt to replace published periodical indexes and abstracting journals, but is directed toward the particular interests of the company and fills the gaps in current indexing.

The purpose of the abstract bulletin of the Lilly Research Laboratories is to share the reviewing of scientific jour-

nals so that staff members can scan with minimum time and effort the abstracts of publications, not only in their own but in allied fields. This cooperative method of reviewing by subject specialists gives a wider coverage and careful evaluation of articles, thus providing the research staff with better quality abstracts for less money than if extra persons were added to the staff for this purpose. There is, of course, the disadvantage of inadequate control over articles abstracted or omitted. Absence from the company, due to contact trips and meetings, or intensity in work may lead to a time lag in reviewing journals.

An average of 160 abstracts per week is processed by the library and distributed by the Mailing Department. Plans are made to reduce the number sent to each staff member by issuing two bulletins, one pertaining to scientific articles, the other containing clinical abstracts. A recent cost survey which included time spent by abstracter, library staff, and departments responsible for mechanical processing resulted in an estimated $1.50 per abstract. There is no way of measuring the immediate effectiveness of this service, but inquiries have indicated a desire for its continuation.

The negligence of individuals releasing journals in the designated twenty-four hours has led to a review of the current routing system. Under the new plan adopted there is a distribution of Xeroxed tables of contents with the current copies of the most important titles accessible in the Periodical Room, and available only for overnight circulation. Duplicate copies of titles are still routed to personnel located some distance from the library, as well as to anyone who still insists on receiving them. After this system has been in effect for three months, a survey will be made, and it is anticipated that the number of titles to be routed will be reduced to a minimum.

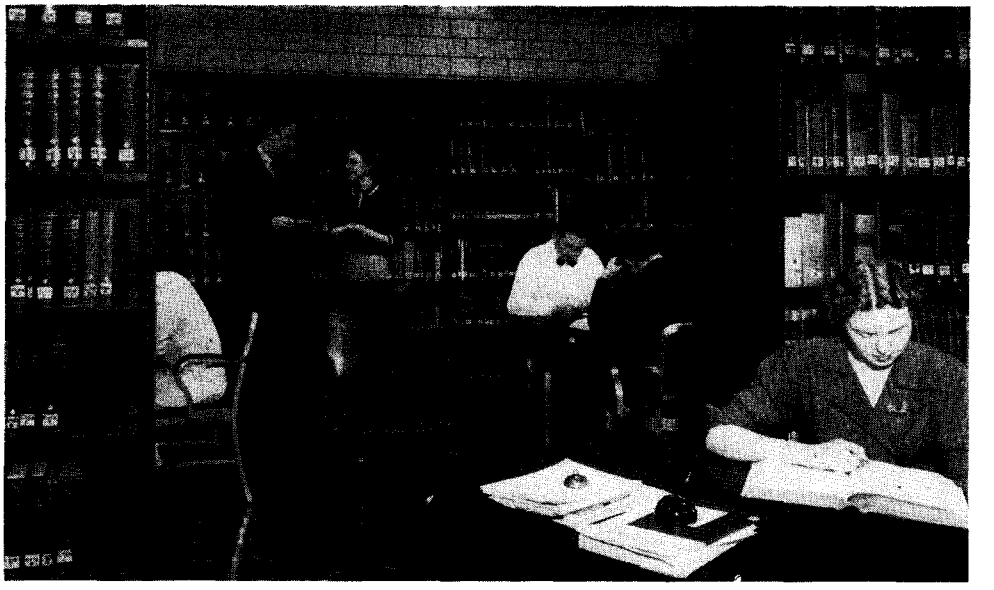
A major concern in reaching a decision to adopt this program was its cost. Miss Mehne[1] reported a cost of

Mrs. Irene M. Strieby, chief librarian, Eli Lilly and Company

approximately sixteen cents per page for the autopositive copy and two and one-half cents per finished sheet for tables of contents produced by the Ozalid process. While no overall figures are available in this paper, another library[2] has reported a total cost of $6,400 per year for duplicating and distributing tables of contents of 374 journals to two hundred users of the service. To be contrasted with this figure of $6,400, however, is that of $56,000 estimated as the time saved by the research personnel figured in dollars as a result of the service.

All special libraries have developed particular services which enable them to serve best the organizations of which they are a part. In addition to the *Abtract File* mentioned earlier, special files of interest to a pharmaceutical concern are maintained by the reference division for hard-to-find information. A *Product File,* based on data obtained from regularly checked sources, contains descriptions, uses, prices, chemical formulas, clinical uses, bibliographic references, dosages, forms in which they are sold, and sources of pharmaceuticals.

Closely allied with the *Product File* are the *Company File* and the *Copy Writers' Reference File.* The latter is a collection of descriptive literature on drugs of competitive firms as well as our own, arranged by Lilly drug, followed by competitive product. Reprints of articles on various drugs may be in-



Jewell Maurice, supervisor of technical processes in the Lilly research library, checks five-year cumulated index at desk while Mrs. Barbara Barnes, library assistant, shows cards from the Abstract File to James L. Rowe, Ph.D., Lilly patent technician.

cluded if no other information is available. In the *Company File,* one may find price lists and miscellaneous literature of competitive organizations, arranged alphabetically by company.

A demand for material of an historical and illustrative nature led to the development of a *Picture and History File* where may be found pictures of noted men of science, hospitals, medical and pharmacy schools, as well as famous pictures by well-known masters in the fields of surgery, medicine and pharmacy. Requests from the Public Relations Department and the Advertising Department have led to the inclusion of subjects not of a scientific nature, but material which can be used in the publication of an employee magazine, or in a piece of advertising copy.

Other useful files are those maintained for reprints of articles by well-known authors on subjects related to the major interests of the company, appearing in journals not kept permanently: patents; publishers' and book dealers' price lists; trade catalogs; telephone directories; college catalogs; and a general information file of clippings and pamphlets. The *Organization File,* where can be found numerous foundation reports, programs of meetings, as well as directories of scientific, technical, and medical societies, is steadily growing more useful.

Although an adequate working collection is maintained, there are still many publications needed to further research which must be borrowed from other libraries. With the adoption of the *Interlibrary Loan Code,* 1952, and the increase in number of loans, the services of a full-time staff member are required to satisfy this need. An attempt is being made to reduce the number of loans by purchasing photostats or microfilms of single articles and complete files of journals most often requested.

Assisting the library clientele in the use of reference materials is the most important aspect of library service. In fact, it provides the yardstick for measuring the effectiveness of all library procedures. Reference work ranges from quickly answered inquiries to exhaustive bibliographic surveys. In addition to the research staff, the library users include personnel from many departments such as Professional Services,

Product Promotion, and Advertising Design and Promotion. A typical request from the last named group concerned illustrative methods used in preventing the spread of influenza, first known as sweating sickness, from the Crusades to World Wars I and II.

Through the Professional Services Department, many questions are received from pharmacists, physicians, nurses, and from pharmacy and medical school students and their professors. Even a layman of New Orleans, at the suggestion of a medical book publisher, wrote for the identity of the first maker of pills, the name to be given to a new Mardi Gras organization with members limited to pharmacists and doctors! The scope and variety of library service has been illustrated with kodachrome slides which have been made for demonstration groups of our medical service representatives abroad who cannot visit the Indianapolis headquarters. These can also be used effectively in the orientation of new employees, a continuous process for which the library staff is responsible.

II. Business Information Service

The Library Business Service grew out of an increased demand from all areas of the plant for strictly business information. Requests for statistical data from the Market Research Division particularly emphasized the need for expanding the collection of materials covering this field as well as increasing the staff time devoted to this area of work. Gradually it became necessary for one member of the library staff to devote full time to supplying this type of service. Because of the wide use made of the scientific abstracts, it was decided to provide a similar service for the business management group. At first the business abstracts were just one or two sheets of mimeographed book notes and other items of interest. They expanded into a weekly service issued by the ditto process, changed to multilith after it was demonstrated the change meant a better product in less time at lower cost.[3] The essential difference between the scientific abstracts and the business abstracts is that the latter are written by the staff.

The Library Business Service in its initial stages operated figuratively from one corner of the library. With the increased demand for information from the various business operating units, there was an accompanying need for an increase in physical space and staff. There was also a recognition of the need for closer proximity to its users. Since the Market Research Division would logically have the greatest continuing use for the type of information included in a business collection, the decision was made to locate the Service adjacent to this Division in the administrative office building.

Although the Market Research Division is the most frequent user of the Library Business Service, many requests are also received from other departments, namely, Personnel, Public Relations, Industrial Engineering, Accounting, Purchasing, Sales and Production Control. The staff has grown from one to five. Today two staff members are required to scan and abstract articles in the three hundred journals which are received each month. The assistant librarian handles the reference questions with occasional assistance from the abstracters. A clerk-typist is kept busy typing the weekly abstract sets and filling resulting requests for original articles. A library assistant checks in and shelves journals and also routes journals to 358 associates throughout the company.

It has been said that a man who is so busy that he does not have time to read his trade papers is like the man who was so busy chopping wood that he did not have time to sharpen his axe. In recognition of the validity of this statement and the already proven value of the scientific abstracts to the

research staff, abstracting became an integral part of the service to the company's business management groups. Librarians will recall the nation-wide interest in the article published in 1950 on the "Reading Habits of Executives."[4] Our experience, encompassing as it does a period of seven years, bears out the findings of Bursk and Clark. When return request cards and reference questions are analyzed carefully, it is possible to draw conclusions relative to the reading habits of management groups from top to bottom, if employees here can be regarded as typical. Such an analysis indicates that the top and middle management personnel are interested primarily in reading to increase their effectiveness on the job. Reading for recreation is shown to be entirely secondary in purpose.

Unlike the medical and allied scientific fields, which enjoy the benefits of abstracting services such as *Excerpta Medica, Biological Abstracts, Chemical Abstracts,* and others, the business field does not have such services available. Furthermore, the drug, industrial and trade publications never have been adequately indexed in the regularly published indexes, such as *Readers' Guide, Public Affairs Information Service,* or *Industrial Arts.* In the two latter indexes, articles are not listed by author. This omission, as far as our purposes are concerned, increases the value of the abstract service since a by-product of the service is an information file composed of 3 by 5 inch cards with subject, author, and title entries.

There are three prime objectives of the abstracting service: (1) to give as complete coverage as possible of business literature at the lowest price; (2) to provide promptness of abstracting and indexing of journals not included in the commercial indexes; and (3) to pinpoint information that is of specific interest to the company. The abstracts are limited to seventy-five words. An indicative abstract is written which provides only sufficient information for the reader to decide whether or not he is interested in consulting the original article. The weekly set is restricted to forty abstracts because of the recognition that it is unwise to overwhelm busy people with more than they have time to digest at one reading.

Subjects covered in the abstracts include personnel work, executive training and development, operating costs and procedures, storage and inventory, economic trends, materials handling, public speaking, wage incentive plans, and marketing data. Additional information pertinent to company interests dealing with disease incidence, public health, and news items concerning other pharmaceutical companies are also included. The decision of whether or not a journal article is to be abstracted is influenced by the following factors: (1) Does it discuss a topic in which there is a current or perhaps a future interest? (2) Is the journal indexed in one of the commercial indexes available in the library? (3) Is the topic discussed of plant-wide interest or should it be called to the attention of one department or individual? (4) Is there likely to be a demand for the article before it appears in the indexes?

The selection of the forty abstracts to be included in the weekly sets is a combination of our knowledge of projects being conducted throughout the plant, the results of analysis made of requests received from previous abstracts, awareness of trends in business literature at a given time, and intuition. Sometimes an abstract is included because it is felt that the readers should know about a particular article or the topic has not been included in the abstracts for several months, or as a reminder that the Library Business Service provides information concerning the topic.

An indication of how effective the criterion for selecting abstracts has been, can be seen by examining the number of requests received for the articles abstracted. Requests for the first four months of 1953 were 744, 489, 728, and 968. The one thousand mark has

Helen Loftus, supervisor of the Library Business Service, selects cards from file to help market analyst find statistical data. In foreground, Rosemary Antrobus, library assistant, types business abstracts on cards.

just been passed. The policy of limiting the number to forty carefully selected articles has been in operation a little over one year. Previous to that time each set contained sixty to eighty abstracts. The number has been cut in half and the requests have doubled.

The abstract sets are distributed to 365 employees throughout the plant. Due to a recent analysis of their distribution it was learned that, although the trend has been toward increased use of the abstracts, there has not been a comparable increase in the number of abstract sets distributed. There never has been any restriction as to who might receive them. The analysis further indicated that a very small percentage receiving the abstracts are employees on the non-supervisory levels. In fact, by far the greatest number are distributed to the administrative and planning levels of management; however, an examination of the requests received for the original articles indicates that the sets are given widespread circulation within the various departments. There is no external distribution.

As the result of a cost analysis made of the abstracting service within the past year, it was learned that each abstract costs $3.22. This figure includes physical space, equipment, materials, labor, and customary company overhead costs. It represents only the cost of the forty items included in the weekly abstract sets. Articles summarized and entered directly into our *Business Information File* are not included. Additional items not circulated average between sixty and eighty each week.

The *Business Information File* is an important by-product of the service as far as reference work is concerned. Questions which can be answered from the information file range from the factual type, such as requests for data on new drug products introduced in 1952 or the free exchange rate of the Baht for Thailand, to those involving search and evaluation of the use of quality control charts and how to prepare them or methods to be used in evaluating results of a training program.

Each abstract is assigned an average of two to three subject headings with the result that there is available for reference work an annotated index to

our journals. In order to assure a certain degree of consistency in assigning headings, each one is defined in the subject heading authority file. Headings are taken from the published indexes as well as company usage of terms. The paramount consideration at all times is for the users of the file. Haykin, in his recent book, *Subject Headings, a Practical Guide,* says "All other considerations, such as convenience and the desire to make entries in some logical order, are secondary to the basic rule that the heading, in wording and structure, should be that which the reader will seek in the catalog, if we know or can presume what the reader will look under."[5] There are approximately 2,900 subject headings in the authority file which have been selected and are defined with this basic principle in mind.

Other information files which have been developed include: company annual reports, state and foreign public health reports, hospital reports, house organs, and foreign country economic information. There is, of course, the ever present and valuable pamphlet material file. The company annual report file is divided into two major sections: (1) companies in the pharmaceutical and allied fields, (2) other major corporations and a selected group of insurance companies and banks. Duplicate copies of the current reports are kept and one copy for preceding years. Newspaper clippings, prospectuses, pamphlets of special interest, and special financial analysis reports are also included in the file.

In addition to the abstracting service, reference work, and maintenance of special files in response to a special need for them, the staff periodically prepares book reports for the company's internal house organ for supervisory personnel, *Management Report.* Books to be reviewed are chosen by the staff or are recommended by the editor of the publication. Special displays are prepared for the exhibit case at the request and in cooperation with the Internal Employee Communications Division. Information is provided for feature stories concerning the library in the employee house organ, *Lilly Review.* A special cover has been designed for bibliographies prepared by the library. In this way, work done by the library is identified, the bibliography is given a professional appearance, and the library is provided with an additional medium for calling attention to its services.

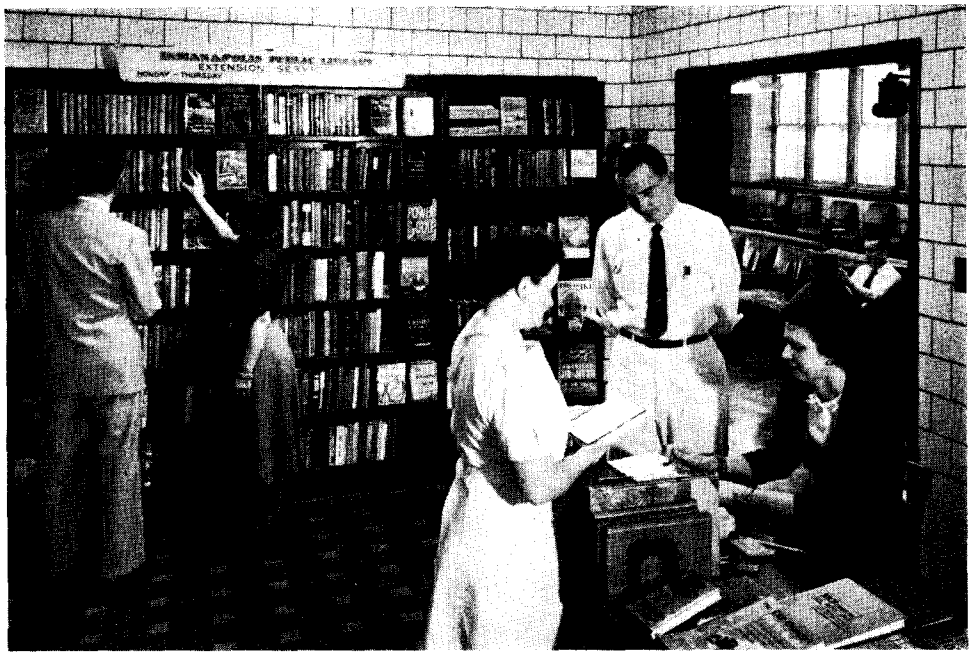
Since public relations and publicity are always important for all activities and since they are particularly important in order to achieve the greatest degree of service as far as the library is concerned, they are not neglected in the plant-wide service program.

III. *Library Extension Service*

The preceding papers emphasized concentration of library service in two specific subject areas, science and business. While both of these fields encompass many subdivisions of knowledge, activities within the scope of each can be thought of as "depth" service in contrast to "breadth" service which cuts across all subject lines. Every industrial library has a potential or a known demand for information reaching beyond the limitations implicit in subjects receiving major emphasis.

To meet requests for the more general type of facts — facts that tie in closely with community relations, editorial work, and employee activities, none of which have subject boundaries — as well as to offer to associates an opportunity to satisfy their need for further reading, whether for information or pleasure, the library has two plans.

First of all, it is recognized that the library belongs to everyone in the organization who needs to make serious use of it. So to give wide range in service, the library staff is prepared to handle requests for specific facts such



Louise Lage, assistant Lilly librarian, supervises the Indianapolis Public Library's extension service during the Thursday lunch hour with he help of Mrs. Louise Rancourt, library assistant.

as biographies, quotations, dates, addresses, and translations of foreign words and phrases, all of which can be obtained from general reference books. Through a knowledge of resources in other libraries, reference service is further widened when necessity arises; this often results in acquainting an employee with other collections in his community, a desirable end in itself.

The other plan to gain latitude in library service is made possible through cooperation with the local public library which has pioneered in offering extension service to any industrial plant or to any institution in the city expressing a willingness to utilize it and possessing enough potential borrowers to justify initiation of such a service.

Extension Service of the Indianapolis Public Library had its beginning, on an experimental basis, as early as September 1938 and our company was one of several sharing in the experiment. It was not until the summer of 1941, however, that it was fully organized. The librarian of the Indianapolis Public Library and the company librarian assessed the need and cooperated in preliminary planning. With the aid of the Industrial Relations Department, a strategic spot was chosen for the location at the McCarty Street plant. Steel book shelves, with screen fronts to be removed during hours open, yet through which the books can be seen at all times, were placed along the main hallway outside the cafeteria, off which open the recreation rooms and the passenger elevator.

The library hours are from 11:30 A. M. to 1:30 P. M. on Monday and Thursday of each week: this period of time enables any employee to stop by the station library on his way to or from lunch. The lunch period has been reduced from one hour to forty-five minutes, but six months of trial has not cut circulation figures.

A librarian from the Indianapolis Public Library comes each Monday and is available to employees for consultation anent their reading interests. Thus, it is possible to shift the book

collections bimonthly in order to cover employee interest in the home, job, and leisure time. When the service was started in 1941 on full scale, a stock of up to nine hundred books was maintained, whereas now it sometimes reaches two thousand books. Also special requests are filled weekly from the public library's million books. In 1952 there were 1,965 such requests. Finding this material sometimes requires hours of searching on the part of the Indianapolis Public Library's extension staff, which serves the six stations and eight collections provided to business and industrial groups, as well as to two local hospitals, or sixteen units in all.

When the Kentucky Avenue plant of our company was opened five years ago, the public library's station service was proffered and accepted. Last year 5,997 books were borrowed by employees of this plant. Added to this figure are the 9,567 books circulated at the McCarty Street plant, or a total of 15,564 books. In both plants 386 new borrowers registered during the year.

At this point one may rightly ask what part the company library staff plays in this service. The assistant chief librarian supervises the pick-up and return of books each week by the plant transportation department. She also arranges for assistance to the station librarian. One member of the company library staff assists regularly on Monday while, on Thursday, full responsibility is taken for the operation which requires the services of two; a fourth staff member is always available as a substitute in case of illness or vacations.

These two stations are miniature libraries which serve as a link between the community's main book source and the Lilly readers and their families. The usual preferences for relaxation—mysteries, romances and westerns—are extended currently to the field of science fiction. The interest in politics has been replaced by plans for vacation travel. Books on human relations and specific material on the employee's type of work are always in demand.[6]

To be sure, there remain hundreds of Lilly employees who prefer to go directly to the public library or to its branches, in fact, this station service must not be thought of as replacing the traditional contacts the library has with its community. Rather it should be looked upon as a supplementary one. There will always be employees who prefer the individualized advisory service they receive or who find it more convenient to use the station library. As for the public library, its mission is accomplished if it brings the book and reader together, no matter when, or why, or under what circumstances. It all adds up to an informed, pleased, and understanding public.

Summary

Development of company-wide library facilities has been illustrated by the growth of service within one organization. Contributions made in the subject areas of science and business have been highlighted. Objectives are efficient reference service, prompt coverage of pertinent literature, and development of special files in response to demonstrated needs. Unification of technical processes such as binding, cataloging, and order work, as well as interlibrary loans, aid in making materials readily available. Thus the sum of all these parts is a library system which is company-wide in scope.

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Problems of Issuing a Company Pharmaceutical Abstract Bulletin*

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ON JULY 1, 1952, after continuous publication for twenty-four and one-half years the *Squibb Abstract Bulletin* was discontinued. An explanation of some of the difficulties involved in its publication seems to be in order, since fellow librarians and scientists who subscribed to the *Bulletin* were extremely interested in knowing why publication was suspended.

Library problems as related to abstract bulletins or information service in general, may be grouped around three focal points: (1) the needs and demands of the individuals in one's organization; (2) the published materials which are available to serve these needs; and (3) the methods by which the individuals can be informed of the published materials.

Let us consider first the needs and demands of individuals in one's organization.

1. Staff members want to be informed of everything being published currently which is in any way related to the work they are doing. They are particularly interested in journals which are outside their main field of interest. A bacteriologist would be apt to read the *Journal of Bacteriology,* but might not see an article on the use of a new vaccine preparation in the *New England Journal of Medicine.*

2. They want to be informed about this material the moment it is published. Every day of delay in hearing about work done in another laboratory may mean lost time in their own laboratories.

3. They want to be given enough information about the published material to know whether it is worth their time to check the original.

4. They want the facts to be accurate and to give a proper picture of the author's point of view.

In addition to requiring current information as soon as it is published, individuals in our organizations very frequently need facts which have been published previously, perhaps the maximum dosage of vitamin D, or a summary of all the work which has been done on a chemical which the company is considering as a possible new product. This information must be: complete as to coverage of all possible literature sources; usually specific in its details, whether it is a survey or an answer to a specific question; accurate; and prompt. Experience at Squibb has shown that our own files are the best reference source for answering both these types of questions. To provide as many answers as possible, more detailed abstracts than would be required for a current bulletin are sometimes desirable for the files.

So far, from our discussion of their needs, it might appear that the individuals in our companies are more or less of the same type. However, particularly in a company as large as Squibb, this is not true. Our company's wide and ever-expanding fields of interest lead to subject specialization on the part of many of the staff. Moreover, the type of job determines an individual's point of view: The executive wants an article digested into one sentence; the advertising man wants a specific quotation from it to be used in promotional literature; and the investigator wants an accurate description of the work with details. Even two individuals doing the same type of work vary in their methods of thinking and working. Research men tell me that they do not want abstracts at all because they cover the literature by reading ten journals at home each night

* Revision of paper presented at a meeting of the Science-Technology Group, New York Chapter, Special Libraries Association, March 11, 1953.

(leaving the rest, presumably, for a full weekend). Others say that they want abstracts so detailed that it will be unnecessary to go to the original at all. And finally, there is the problem of the critical evaluation of published articles which many scientists would appreciate.

Perhaps these problems can be solved by a certain amount of compromise in libraries which serve twenty research workers in a fairly limited field, but in an organization like Squibb, where there are perhaps five hundred people who have need of information from the literature, and where the pharmaceutical field is spreading rapidly into all sorts of related fields, it would take not one — but many — abstract bulletins, with many different arrangements, and with many different abstracts of one article to completely satisfy everyone.

Though we covered some 13,000 literature articles and patents in our abstract bulletin in 1951, only twenty of forty-seven staff members answered "Yes" to the question: "Does the *Squibb Abstract Bulletin* have adequate coverage of your particular field of interest?" Sixteen of the remaining twenty-seven said that the coverage was partially adequate, and eleven said that it was not adequate. I hasten to add that forty-one said it offered significant aid in their review of current literature.

Turning to the next point around which problems of library service revolve, the published materials which are available to supply the needs of our organizations, we all know that the amount of material being published on any given subject is increasing rapidly.

I like Sir Edward Appleton's estimate[1] of the volume of scientific literature in 1948, when he remarked:

"If anyone set himself the task of merely reading — let alone trying to understand — all the journals of fundamental science published and worked solidly at his task every day for a year, he would discover that at the end of that year he was already more than ten years behind! If the same constant reader (I think we may well call him a constant reader) had included the technical literature as well, he would find himself about one hundred years behind in his work after twelve months' effort!"

The increase in publication of literature related to chemistry is indicated by the fact that *Chemical Abstracts* contained approximately 51,000 abstracts of papers in 1951 as against about 30,000 in 1946.[2] We may assume that this 70 per cent increase was accounted for partly by an increased number of periodicals (either actually new ones or ones resumed after the war) and partly by an increased number of articles per periodical.

The number of periodicals received at Squibb has increased in much the same way. In 1952 alone, we subscribed to forty new periodicals, and probably began to receive some additional ones free of charge. Yet we have found that with our present staff we index only about 355 periodicals per month. In spite of deciding occasionally not to index a journal which seemed unimportant, we estimate the number of journal titles covered had increased from about 275 in 1946, to around 400 in 1952. Since many of these journals were weeklies, the actual number of journals to be handled each month was considerably more than that, and in 1952, we cut our list by over 100 titles. Of the resulting 308 titles on our list, only 190 journals had been received regularly in 1946. The rest represented a broadening of interests, new publications and foreign journals gradually resumed. From these facts, I think we can deduce that we are not now covering our total subject field as thoroughly as we did in 1946.

The third problem, providing varied individuals with all the literature pertinent to their needs, has already been shown to be most difficult. The specific methods which we used in producing our abstract bulletin have already been discussed.[3] Our constant effort was to produce a bulletin of the highest pos-

sible quality at the lowest possible cost. But the cost of producing an obstract bulletin aimed at covering the interests of five hundred people in the more than four hundred journals which were considered pertinent eventually became prohibitive.

We estimated that in 1951 the *Squibb Abstract Bulletin* cost us almost $28,000. This figure includes the labor costs for abstracting and editing as well as for typing, proofreading, multilithing, collating, distributing the bulletin, and the cost of materials. It does not include the labor cost for indexing of material which was done in the course of preparation of the bulletin. Nor does it include other library costs such as subscriptions to journals and overhead. Finally, it excludes the cost of external distribution insofar as it could be separated.

What did we get for our money? We issued a weekly literature bulletin which contained in 1951: 3,728 informational abstracts done by our staff; 1,062 copied author's abstracts; and 6,435 title references, a total of 11,225 items or about 216 per week. We also issued a patent section which contained 1,348 informational abstracts prepared by our staff, 52 patents of which selected claims were copied, and 284 patents referred to by title only, a total of 1,684 items or 32 per week.

Since our bulletin was costing us roughly $540 per week, it cost us a little more than $2 each for every single item in it. It was reaching 161 staff members at a cost for each of a little over one cent per item.

We felt that we were doing a reasonably adequate job by not only carefully abstracting or copying good informational summaries for the most important material, but by also including references to many other titles under an index heading so that they could be easily located by anyone interested. Though a cost of one or two cents per item per company reader would seem low, however, our broad coverage reduced the actual number of items of value to each.

Since I have mentioned the increase of publications to be covered from 1946 to 1951, let us see how the cost of producing our bulletin had increased during that period. In five years our costs had almost exactly doubled. Obviously a good part of this increase paralleled the general increase in costs all over the country. The Bureau of Labor Statistics *Cost of Living Index* went up 40 per cent between April 1946 and April 1951, but during that same period our labor costs had increased by a much higher percentage. And so far as materials were concerned, both our internal and external distribution had doubled. In short our doubled costs represented a real increase of only about 10 per cent in materials and labor.

Meanwhile, how did our production in 1946 compare with that in 1951? The figures for 1946 show that one-eighth more informational literature abstracts were produced than in 1951, although 15 per cent fewer summaries were copied and only one-fifth as many items were referred to by title, so that the total number of literature items cited in 1951 was one and three-quarter times that in 1946. For patents, there was a small increase in both informational abstracts and total number of patents covered from 1946 to 1951. In other words, the large increase in number of items cited shows that we were spreading our efforts much thinner in 1951, abstracting only 39 per cent of the items we considered worth mentioning, compared with 67 per cent in 1946.

In spite of this and other difficulties described, the announcement of discontinuation of the *Squibb Abstract Bulletin* received a response most gratifying to those of us who had worked so hard on it. Thirty-one of 180 subscribers outside the organization sent us unsolicited expressions of regret.

Dr. George E. Farrar, Jr., of the Editorial Board, Dispensatory of the United States of America, wrote: *The Squibb Abstract Bulletin was most useful to*

both Doctor Osol and me in preparing revisions of the "United States Dispensatory." This "Bulletin" was the most pertinent of the available abstract journals to a survey of therapeutic literature. We regret its discontinuance.

From Dr. Stewart C. Harvey of the department of Pharmacology, University of Utah: *Many of us have found the "Bulletin" to be an inestimable aid in covering the literature and in providing us with useful abstracts that may be clipped and filed.*

I think these letters express most eloquently the need for the sort of abstract bulletin which we were issuing.

Is there any solution to the problem of issuing a company pharmaceutical abstract bulletin? If it cost Squibb $28,000 to put out a prompt abstract bulletin, how many other companies are spending as much or nearly so for a duplication of this effort? If a hundred companies are spending an average of $10,000 each on abstract service, a million dollars is being spent largely in the name of promptness.

In the medical field, the *List of Current Specialized Abstracting and Indexing Services,* prepared by The International Federation for Documentation in 1949,[4] included 390 separate journals which contained abstracts. Here again is a tremendous duplication of effort.

Does it not seem possible that if all this tremendous effort being put forth by various individuals and small groups in the abstracting field were put together, a published abstract bulletin coming closer to our ideals might be issued?

Library service may achieve miracles of economy in the amount of time saved within a given company. However, in a broader sense, it is no economy at all to provide a more or less exact duplication of service at the same cost available elsewhere. Though it may take years for librarians and industry to overcome all the obstacles to a cooperative effort in the abstracting field, eventually it must come because there is no other solution.

Already some steps are being taken.

The Unesco International Conference on Scientific Abstracting in 1949 made many important recommendations.[5] Among other things, it pointed the way to prevention of duplication among existing publishing abstract services and encouraged general publication and distribution of somewhat standardized author's abstracts at the time of publication of the periodical article. Though no real action was taken, this report provides a basis on which more limited groups might well build.

The most concrete approach to action in the field of cooperative company abstract bulletins of which I am aware is that of the American Petroleum Institute. After about five years of careful study and continuous effort in which five librarians took active part, the Refining Division of the Institute has approved a plan for a petroleum abstract bulletin to have a basic coverage of the 100 most important journals in the petroleum field; they have appropriated money to start the operation; publication was begun as of January 1954.

What will the next step be?

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British Libraries and the Fulbright Program

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SINCE 1949, when the Fulbright Program was started in the United Kingdom, ten American librarians have been awarded United States Government Grants to study British libraries. The research projects of these librarians have been concerned with the following fields:

- Investigation of reference and information services in the British libraries.
- Library services to secondary and elementary schools.
- British Museum catalog of seventeenth century books.
- Comparative study of U.S. and U.K. training methods in librarianship.
- Methods of cataloging manuscripts in English literature.
- Manuscript sources for Virginia history.
- Pre-Linnean books on natural history.
- Structure and operating of inter-library cooperative organizations and activities.
- University library administration and research methods.
- Methods whereby British industrial libraries serve their parent organizations.

The objectives of the Fulbright Program are succinctly stated in the first two *Annual Reports* of the United States Educational Commission in the United Kingdom, "The Fulbright exchanges are drawing Britain and America more closely together in both the immediate and long-term sense. These awards enable Americans to participate for a year in British university life and their British counterparts to visit America, in the belief that the immediate result, furthering the academic and professional interests and achievements of scholars, teachers, students, librarians, and others, will soon lead to something more significant—the growth of a corps of responsible leaders in each country who have acquired the experience abroad needed to mature their natural persuasion to Anglo-American unity into a firm conviction. Ultimately, it is hoped, the influence of interchange will spread to a large portion of the British and American public. The Fulbright Program will then have reached its fullest meaning and the high ideals that motivated its inception will then have been realized. The use of funds derived from the sale of United States war surplus materials for such a high purpose is surely a stirring and imaginative way to beat the swords of war into ploughshares. On August 1, 1946, President Truman signed Public Law 584 of the 79th Congress, known as the Fulbright Act, which amended the Surplus Property Act of 1944 so that part of the currencies and credits of other countries acquired by the United States through the sale of surplus property abroad might be used for educational purposes. Public Law 584 was brought before Congress by Senator J. William Fulbright of Arkansas, an ex-Rhodes Scholar (Pembroke 1926-1928), formerly President of the University of Arkansas and strong supporter in Congress of international cooperation."

A study of British industrial libraries must primarily be conceived with the functions, services, and operations of representative industrial libraries of all types and sizes. In addition, other areas of librarianship are also very important in connection with effective industrial library service: inter-library cooperation on a regional, national, and industry-wide basis; the relationship between national, public, society, and research libraries and industrial libraries; and the coordination of bibliogra-

* Mr. Southern is spending a year in Britain studying special libraries on a Fulbright Award.

phic services through Aslib, the Department of Scientific and Industrial Research (DSIR) and The Library Association.

Outstanding industrial libraries of all types are to be found in the United Kingdom. In the chemical industry the libraries of the Imperial Chemical Industries, Ltd. are notable. The Boots Pure Drug Co., Ltd. in the pharmaceutical industry; the Shell Petroleum Co. in petroleum; Metropolitan-Vickers Co. in electronics; Dunlop Rubber Co. in rubber; Tate and Lyle, Ltd. in sugar; United Steel Co. in steel; Bristol Aeroplane Co. in aeronautics; British Nylon Spinners, Ltd. and Cataulds, Ltd. in textiles; and the Metal Box Co. in packaging. This is just a sampling of the outstanding industrial libraries in various industries.

Libraries of professional societies — of which there are probably a greater number in the United Kingdom than in the United States — offer either directly or indirectly, valuable service to industrial libraries. The Institution of Electrical Engineers, the Chemical Society, the British Institute of Management, and the Pharmaceutical Society of Great Britain are typical of these professional society libraries. Closely related to society libraries are trade association libraries. The library of the International Wool Secretariat is an outstanding example of a library of this type. Its collections are extremely specialized and the information service in the field of wool is excellent.

Unique in the United Kingdom are the research association libraries. There are some forty of them, covering such fields as coal, cotton, iron, flour milling, packaging, food manufacturing and paint. The British Non-Ferrous Metals Research Association and the British Scientific Instrument Research Association are associations of this type. The research associations are financed partly by the government through the DSIR and partly by the firms in the particular industry concerned. Nearly all of them have library and information sections which serve their own research staffs and the member firms all over the country. The abstract bulletins issued by these libraries are of an exceptionally high quality. The DSIR also has fourteen research organizations which it has established or for which it has assumed responsibility. Its own library is primarily concerned with the dissemination of scientific and technical information within British industry.

The national libraries in the United Kingdom play an important part in promoting industrial library service. The Science Museum Library, the National Central Library, and the Patent Office Library are perhaps the most often used by British industrial libraries. The National Central Library—and the 225 libraries cooperating with the NCL — offer a centralized interlibrary system of lending which has no counterpart in the United States. In 1952 more than 205,000 books were loaned under this plan.

British public libraries are also offering excellent service to industrial libraries and many of them are presently expanding their business and technical departments. The public libraries of Manchester, Sheffield, and Birmingham have outstanding business and technical information departments. The Sheffield Public Library sponsors a cooperative library plan involving thirty libraries in the Sheffield region. The Acton and Tottenham Public Libraries in the London metropolitan area have also recently established cooperative projects with the libraries in their areas. The Liverpool Public Library is working with the DSIR in promoting a regional cooperative library project there.

The industrial, society, research, public, and national libraries in the United Kingdom offer a rich field of study for the American industrial librarian interested in promoting library service in the United States. I have been greatly impressed by the enthusiasm of British librarians, by their desire to offer superior library service, by their deep interest in interlibrary cooperation, and

by their appreciation of the importance of library service within industry.

The library meetings in the United Kingdom also offer an excellent means of learning more of British library practices and becoming acquainted with British librarians. The opportunity to attend library meetings of one kind or another is much greater in the United Kingdom than in the United States. The monthly bulletin of the London Council of Libraries lists more than thirty meetings scheduled during the month of October in London alone. Typical of the topics of these meetings are as follows:

Applications of industrial psychology in librarianship

Literature of chemistry

Government statistics in market research

Medical collections of the British Museum Library

Meetings of particular interest to the industrial librarian are those held by Aslib and the Special Libraries Section of The Library Association. In addition to the London meetings, regular meetings are held throughout the United Kingdom by the subject sections of Aslib and The Library Association, and by local library groups.

Special librarians in the United States who wish to study British libraries should investigate the opportunities offered by the Fulbright Program. Persons selected for Fulbright Awards receive transportation to and from their homes to the countries of their studies. In addition, monthly living and miscellaneous allowances — both of which enable one to live quite adequately — are given. The special libraries of the United Kingdom, France, Holland, Scandinavia, Switzerland, and Germany are certainly worthy of further investigation for the lessons they can teach us. Information on opportunities available to American librarians under the Fulbright Program is available from the Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Ave., Washington 25, D. C.

MEDICAL LIBRARY ASSOCIATION SCHOLARSHIPS

The Medical Library Association is offering four scholarships of $150 each for summer school courses in medical library work in 1954; two at Columbia University and two at Emory University.

Applications for these scholarships should be made to the school at the time of application for enrollment. Since credentials must be approved in advance, application for admission should be made as far as possible before the date of opening of the session and sufficiently early in the year to permit the schools to pass upon the credentials and forward applications for scholarship to the Medical Library Association. Transcript of academic records should be submitted to the school even if applicant is not a candidate for a degree. May 1, 1954, is the Association's closing date for scholarship applications and candidates must already have been accepted by the school. Completion of either course will enable a student with a bachelor's degree and one year's library school training to qualify for Grade I certification by the MLA.

The course at Columbia University on The Medical Library is offered July 6—August 13; registration, July 1 and 2. It is a survey and evaluation of library resources in medicine, with emphasis on bibliographical and information sources. Some attention is given to special service problems in medical libraries. The course will be given by Thomas P. Fleming, librarian, College of Physicians and Surgeons. It carries a credit value of 3 points. Tuition is $75; registration, $7. For information write The Dean, School of Library Service, Columbia University, New York 27, N. Y.

Emory University offers a course in Medical Libraries July 19—August 21. The purpose of the course is to give an introduction to medical library resources and their use in medical education, medical research, and care of the patient. A major portion consists of a survey of the literature and its bibliographical control. Attention will be given to literature searching as an aid in medical investigation. Consideration will also be given to the application of library techniques, administration, and procedures to medical librarianship. The instructor for the course is Mildred Jordan, librarian of the Calhoun Medical Library, Emory University Medical School. It has a credit value of 5 quarter hours and meets 10 hours a week. Tuition is $60; matriculation, $5. For application forms and further information write to The Director, Division of Librarianship of Emory University, Emory University, Georgia.

LLOYD LIBRARY
Pharmacy in Cincinnati

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A CENTURY AGO there was a considerable pharmaceutical interest in Cincinnati and this has continued to the present day.

As far back as 1813, a volume by Dr. Peter Smith, titled the "Indian Doctor's Dispensatory", was published in Cincinnati. In the preface Dr. Smith stated, "The author is well aware that the public mind has been long impressed with these ideas: viz. 'Indian natives of our country are in possession of cures, simples, etc., that surpass what is made and used by our best practitioners,' so he conceives this publication will gratify such generally, whose minds remain under such impressions."

The pioneers in the absence of physicians relied on such household medicinal works as were then available. Dally's *Medical Practice,* Gunn's *Domestic Medicine,* Knore's *Domestic Practice* and Eastman's *Practical Treatise,* and several others, became the household authority for all medicinal practices or emergency remedies. These books gave our early settlers the general outlines of the ailments of those days, recommending certain drugs, giving advice on what to do and how to prepare certain medications. Consequently these early pioneers knew how to make gargles, anodynes, tonics, cordials, diapheretics, diuretics, fermentations, emetics and even cosmetics.

The United States was practically a virgin forest, only partially explored and full of tremendous plant life, of medicinal roots, herbs and barks. Medicinal plants that did not grow wild or profusely were brought over by the settlers from their homes in Europe, and cultivated in their kitchen gardens. The pioneers soon learned how to plant, when to collect the crops and how to use them, and how to prepare all the various routines necessary in using the extracts from these plants efficaciously. This was indeed domestic medicine and practical pharmacy in its simplest form. The surplusage of these plants were sold to the early country apothecaries and from there they found their way into the general markets and the drug trade.

The early pharmacist labored under disadvantages of which pharmacists today have no conception. The roots, barks, berries and herbs had to be ground in a hand mill, or broken and triturated in large iron mortars to the required degree of fineness. The coarser materials were separated from the finer by sieving through various sized meshes. Decoctions, infusions, fluid extracts solutions and even some solid extracts were then in use. Ointments, salves and plasters were spread on thin leather strips cut to sizes. Pills, boluses, powders and bitters were also in use, and made by the slow painstaking method of the early apothecary. There were many calls for preparations whose formulas were not to be found in the *U. S. Pharmacopoeia,* or *Dispensatory* of those days. Therefore, the early druggist had accumulated in his professional library such books as the pharmacopoeias of other countries and whatever dispensatories, formularies and commentaries he could acquire. Most of the nomenclature for drugs was written in Latin and the published measures and scales were all in the metric system. A good pharmacist had to know languages as well as science in order to be accurate and proficient in the dispensing of his drugs.

Before 1850 a few pharmacists in Cincinnati got together and expressed

a desire that there should be in this city some type of school for pharmacy. Certain evenings were selected for lectures and a room was rented at 259 Walnut Street, where a number of clerks from drug stores attended lectures given by the three most prominent pharmacists in the city at that time. These men were Adolph Fennel, Edward S. Wayne and W. B. Chapman.

The popularity of these lectures increased as well as the enrollment, and in March 23, 1850, the Cincinnati College of Pharmacy was incorporated. It is now considered the oldest college of pharmacy established west of the Alleghenies. Except for a brief period during and following the Civil War this college has been in continuous existence. The Cincinnati College of Pharmacy has enjoyed a long and an enviable position in the annals of its profession. It became affiliated recently with the University of Cincinnati and will move shortly to the University campus.

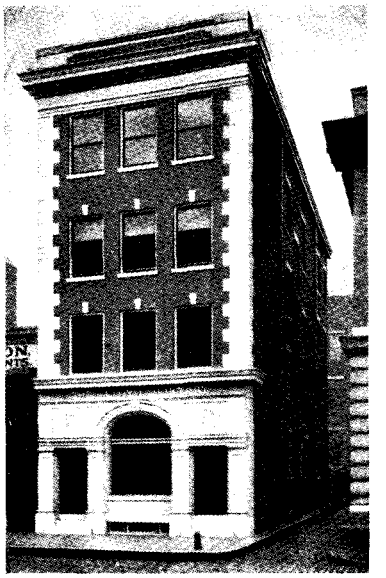
John Uri Lloyd matriculated in one of the first classes of formal instruction at the Cincinnati College of Pharmacy, and was elected a Professor in Pharmacy in 1883. He achieved an international reputation as a manufacturing pharmacist, a chemist, a teacher, an author, an editor, and, in 1864, founded the unique and famous Lloyd Library.

He began to acquire books at an early age. The first of these were Parrish's *Elements of Pharmacy* and Attfield's *Chemistry*. These were placed in a small bookcase along with other treatises and were the original nucleus for Lloyd Library.

Lloyd Library now comprises more than 150,000 volumes and about 90,000 pamphlets in more than sixty languages covering pharmacy, botany, eclectic medicine, natural history and allied fields. Under John Uri Lloyd's direction, the library also published bulletins and issued new material on little known plant descriptions and analyses and therapeutics. Thirty-five bulletins volumes of *Mycological Writings*, writ- *Bibliographical Contributions* and seven volumes of *Mycological Writings* written by Curtis Gates Lloyd, brother of John Uri, were also published.

In 1883, *Elixirs*, one of two forerunners of the *National Formulary*, was written. *Chemistry of Medicines* was written in 1881. *Drugs and Medicines of North America* was written several years later in collaboration by John Uri and Curtis Gates Lloyd. *Origin and History of All the Pharmacoepial and Vegetable Drugs* was written in 1921. John Uri served on the Revision Committee of the *U. S. Pharmacopoeia* and edited the *National Dispensatory* and several magazines, *Pharmaceutical Review, Eclectic Medical Journal,* and *Eclectic Medical Gleaner.*

Lloyd Library is currently publishing *Lloydia, Quarterly Journal of Biological Science*, which supersedes all previous publications. *Lloydia* is available on exchange or subscription. More than one thousand scientific research institutions, libraries, universities and laboratories all over the world send their publications through the International Exchange Service, Washington, D. C.



Lloyd Library

John Uri Lloyd served as president of the American Pharmaceutical Assocaation in 1887-8, and in 1896-1905, as president of the National Eclectic Medical Association. He received numerous honorary certificates in various learned and scientific societies of the world and six honorary degrees.

As the aim and the purpose of Lloyd Library became known, many scientists and professional men in other fields came to appreciate its scope. Gifts of periodicals were added by associations and individuals. The first periodical completed, the *American Journal of Pharmacy* was followed by the *Druggists' Circular,* the *Eclectic Medical Journal* and *Just's Botanischer Jahresbericht.*

The Lloyds pooled their books and with the addition of gifts by such professional men as Dr. John King who gave his entire library to the Lloyds in 1893, the collection assumed importance. Foremost among the large gifts was the entire collection of more than 5,000 volumes of the Eclectic Medical College in 1942.

The extensive holdings of Lloyd Library made necessary a special classification system devised to accommodate the various fields in their fullest significance.

The Lloyd Library offers reference, photostat and microfilm and interlibrary loan services.

In 1953, the library received almost 1,500 visitors. Approximately 2,500 queries were answered by mail.

Holdings

The library contains complete sets of the *Gardener's Chronicle, Planta, Zeitschrift für Botanik,* Hill's *Vegetable System,* Duhamel's *Traite des Arbes et Arbustes,* Lawson's *Pinetum* and the *Atlas* of Sargent's *Report on the Trees of the United States,* and the collection used by Dr. Juettner in writing the history of *Daniel Drake and His Followers.*

In addition, there are such rare items, as Charas' *Histoire Naturelle des Animaux, Paris,* (1687), several editions of Dodonaeus, 1618, 1644, etc., and of Matthiolus, 1598, 1630, and 1655; and a special treatise on *Rhubarb* (1679) by Tillinguis, and an Aldine edition of Dioscorides (1518).

The oldest volume in the library is Meseu's *Vulgare* (1493), the first book of importance ever written on pharmacy. Two copies of Aristotle are of extreme interest—a Greek edition printed in 1584, and another in 1607 by Pacius arranged in two columns in Greek and Latin.

A bibliographical rarity is the *Historia Plantarum* by Pinaeus (1561). It appears to have been the first attempt at colored botanical plates.

Spanish, Italian, Portuguese, Swedish, Bohemian, Russian and Asiatic authors are represented on the shelves. There is a complete collection of the works of Linnaeus, the father of the binominal system of botanical nomenclature. An extremely unique book is Dr. Josselyn's *New England Rarities.* The works of John Clayton termed Claytonius and the works of John Frederick Gronovius contribute to the *Flora of Virginia.* Two venerable works are those of Mattioli, an Italian who wrote in 1586, and Levinus Lemnius, who wrote *De Miraculis Qunitis Naturae* (1628). Tournefort, the father of modern systematic botany, is represented by *Histoire des Plantes,* (Paris, 1698).

One of the most noted books in the collection is by a German scholar, Dr. David Schoepf, on *Materia Medica.* A copy was borrowed from Erlangen, Germany, and written in longhand, since that was the only known copy. Years later, Dr. Charles Rice found an original in an old book store in Italy, and sent the volume to Dr. John Uri Lloyd.

The works of Jonathan Carver, of the provincial troops of America, 1796, and of Manassah Cutler, 1785, as well as Barton's *Collection Toward a Materia Medica,* 1798, are also on the shelves.

The original *Herbarium* of John Riddell, first botanist in this region, which was given to Daniel Gano who settled

early in the Northwest Territory, is included in the collection. The library also has the first colored botanical plates ever brought to Ohio. These were brought from Germany by Gano's gardener in 1820. A collection on entomology was added by Dr. John Thomas Lloyd, the only son of John Uri Lloyd, professor at Cornell University for many years.

Pharmacopoeias

Besides having one of the most rare and excellent collections of mycology in the United States, the largest collection of eclectic medical publications in the world, Lloyd Library also has the largest collection of foreign and domestic pharmacopoeias in America, including a complete set of the "U.S.P." These pharmacopoeias date from 1595 to 1953 and cover all countries issuing such important compendiums for a span of more than 350 years. In addition to these volumes there are commentaries, dispensatories, and formularies published in the languages of the countries of their origin. One of the earliest pharmacopoeias was that of Valerius Cordus, known as the *Nuremberg Pharmacopoeia.* Lloyd Library has a 1652 reprint of the original 1546(?) edition. There is also a 1547 edition of Dioscorides' *Materia Medica.* Reminiscent of the Middle Ages is a Latin volume printed in 1610, *The True Gold, The Philosopher's Secret Stone,* of *Hermes Trismegistus,* by Belga. A facsimile of the *Papyrus Ebers* published by Engelmann of Leipzig in 1875 is not an especial rarity, but is interesting for its historical background, and because it is a beautiful specimen of the bookmaker's art.

Early American publications also line the shelves and prominent among them is Rafinesque's *Medical Flora, or Manual of the Medical Botany of the United States* (2 volumes, 1828).

Truly, Lloyd Library is a treasure house of the world's great literature in its particular fields of interest. Pharmacologists, botanists, biologists and chemists frequently consult Lloyd Library's holdings before publishing their researches.

MLA NOTES

Midwest MLA Meeting

"The Librarian's Services to the Medical Staff," was the topic discussed by Mary Devereaux, librarian of Mead Johnson and Company, Evansville, Indiana, before the Midwest Regional Group of the Medical Library Association, at its Fall Meeting in Milwaukee, October 16-17, 1953.

Mrs. Capitola Parnell, of the Abbott Laboratories, Chicago, was the leader in charge of the Group Meeting on "Workshop Discussions for Pharmacy Libraries."

* * *

New York MLA Meeting

The New York Regional Group of the Medical Library Association held its Fall Meeting at Mount Sinai Hospital on Saturday, November 7, 1953. The morning session was devoted to roundtable discussions, centered on topics of specific interest to medical librarians: bibliographic work, binding, organization of material (cataloging, etc.), and Union Catalog in the New York area. Each librarian chose, in advance, the topic in which he was the most interested, and was given a series of questions which would be helpful in stimulating individual participation, while presenting, at the same time, a full picture of the problems involved.

A brief business meeting was held following luncheon. Claude M. Heaton, M.D., guest speaker, discussed "Developments in Obstetrical Practices." Two colorful reports covering highlights of the First International Congress of Medical Librarianship in London were given by Gertrude Annan of the New York Academy of Medicine, and Pauline Vaillancourt of the Mary Immaculate Hospital School of Nursing.

MARY A. FENLON, *Principal Librarian*
New York City Department of Health

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Philadelphia Area

Mrs. Elizabeth W. Johnson, librarian, Philadelphia College of Pharmacy and Science, is chairman of the Philadelphia Area of the Medical Library Association and also chairman of the MLA Committee on Criteria and Standards for Pharmacy School Libraries.

Mrs. Johnson is a member of the SLA Philadelphia Council.

Bibliographical Methods

*in the Biological Sciences**

KARL A. BAER
Librarian, American Pharmaceutical Association, Washington, D. C.

TWO YEARS AGO, I had the pleasure of addressing you on the subject of *Bibliographical Tools in the Biological Sciences.*[1] While it is quite evident that every branch of knowledge has its specific reference *tools,* the title of today's paper on *methods* requires some justification. I hope to show that there are differences in theory, or if you wish, philosophy, as well as in practice, setting the preparation of a bibliography on the adrenocortical function apart from the compilation of a list on social work during World War II. I also want to make it quite clear, however, that my experience outside biology has been relatively small, and that I did not feel justified in assuming that methods employed in this limited field only can be applied generally.

Henkle in his thorough study on the bibliographic organization of the natural sciences,[2] has set forth the following characteristics of scientific literature as most deeply affecting the problems of bibliographical control: "The cumulative character of science, the extensive interrelationships between the sciences, the growth of scientific journals and, above all, the extraordinary increase in the volume of scientific literature."

Let us have a closer look at the first two of these points. When Henkle stresses the cumulative character of science, he fails to point out — and this may have been unessential to him, but is important to us — that this cumulative development is never "logical, continuous, straightforward."[3]

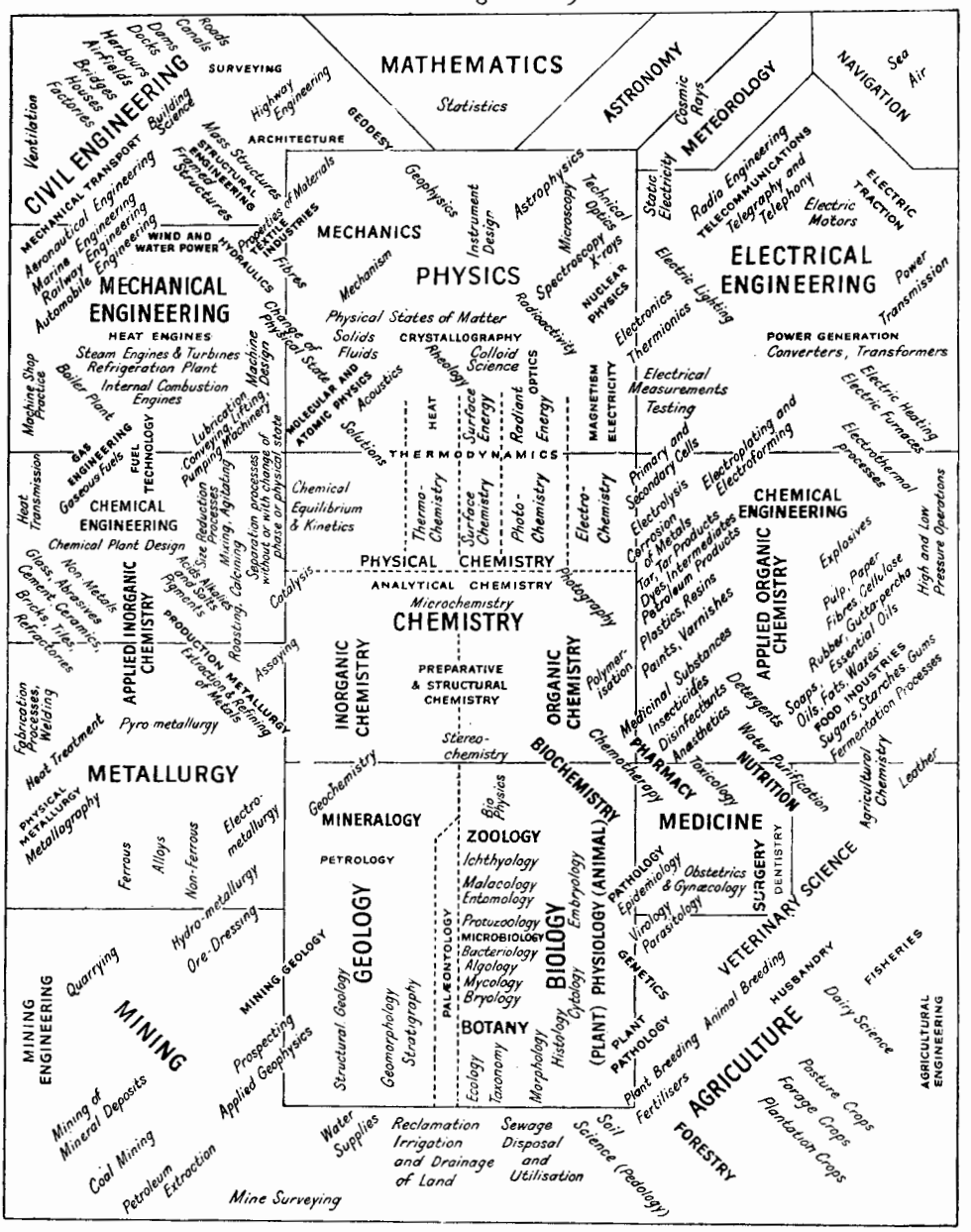
Sarton who underlines this fact mentions the metric system as an example. The idea of the metric system — that the system of weights, measures and moneys should be built on the same basis as our number system — was conceived by Sumerian mathematicians more than 5,000 years ago. The metric system has since been accepted by the majority of civilized nations, but England and the U. S. are still holding out.

An example from the field of biology may be found in the protracted confusion concerning the reproduction of the eel[4] where discovery, denial and rediscovery play havoc with any idea which we may have had of continuous and logical progress in science. It is easy to see how this complicates the task of the bibliographer required to present a complete compilation of primary source material.

Still another complication is this: At all times, prevailing scientific theory and practical need determine the direction of research and the relevance of individual facts. Let us consider physiology. Hippokrates looks at physiology as the place of man in the world; Galen discusses it as "the use of the parts of the body"; Albrecht von Haller, in his "Animated Anatomy", explains the processes occurring within the anatomical structures of the various organs, whereas today, our interest is centered in the physico-chemical changes and interrelationships.[5] Practically, these manifold changes in the basic concept of physiology mean, e.g., that we will not find in today's physiological literature many of the facts demonstrated by as late and outstanding a leader in this

* Paper presented at the 44th Annual SLA Convention in Toronto, Canada, before the Biological Sciences Division, June 24, 1953.

A CHART ILLUSTRATING SOME OF
THE RELATIONS BETWEEN THE BRANCHES OF NATURAL SCIENCE AND TECHNOLOGY
H.J.T.Ellingham. 1948.



field as Johannes Müller (1801-1858) who died less than 100 years ago.

We all know that DDT and penicillin had been known for many years when the discovery of practical uses for them gave them importance. Early references to them, however, were buried in the literature and had then to be dug up by the bibliographer.

This means that the bibliographer must be familiar with the history of basic scientific ideas in his field and must also be able to know and use historical sources. Moreover, in addition

to this knowledge he must also be able to "play a hunch" in the best Sherlock Holmesian manner. Our references to such materials of recent importance as DDT and penicillin show that this applies not merely to so-called "scholarly" work, i.e., compilation of historical bibliographies, but may also enter into such purely practical matters as patent searches in the field of pharmacy.

To demonstrate Henkle's second point, the extensive interrelationship between the sciences, and its importance to us, it will suffice to look at the chart (page 75) showing a presentation made by Dr. Ellingham at the London Conference on Scientific Information.[6] It should be kept in mind that Dr. Ellingham wanted to have this chart "spread over the surface of a sphere" thus "enabling the area of each science to make contact with those of all other sciences and branches of technology with which it is in any way connected."

In the biological sciences, the bibliographer must be aware of another circumstance. "The biological scientist", says Conant,[7] "whether concerned with agriculture or with medicine . . . has for the last hundred years, at least, moved somewhat more freely from applied science to pure science and vice versa than has the physicist or chemist."

This variety in the patron's interest, the simultaneous concern with practice and theory, adds to the bibliographer's burden, and at the same time, I hope, to the pleasure he takes in his work. A fact less frequently stressed is the still existing non-scientific element in such large fields as medicine and veterinary medicine.

Even as the game of chess is not all geometry, but intuition and physchology enter into it, so medicine has still preserved the imponderable attributes of an art to a small but noticeable extent. This factor will probably never be altogether eliminated; man, the object of medicine, presents such infinite variations that a complete, generally valid scientific analysis will never be possible. Consider the recent discovery that out of 5,000 subjects just one is allergic to acrylic resin,[8] or think of the psychosomatic factors in illess. This variability and imponderability characterizes all living organisms and, in spite of today's statistical approach to science in general, sets the biological sciences apart.

Print Volume Increase

We are all acutely aware of the increase in the number and volume of journals and of biological literature as a whole. While more than one thousand books and papers on x-rays were published within the year of their discovery in 1896,[9] it is safe to say that tens of thousands of articles have been published on ACTH since the publication of the initial observations of Hench and Kendall. Currently, the Armed Forces Medical Library receives 7,500 medical journals.

We all realize the increasing importance of such sources as research reports and other forms of scientific communications. A significant graph prepared by Dr. Urquhardt[10] gives an idea of the more than questionable state of affairs concerning the diffusion of this knowledge.

The bibliographer's lot in the field of biology does not seem to be a happy one; the difficulties seem unsurmountable. The theoretical approach seems to lead to a resigned conviction that all we can do is to cease and desist. But, in Goethe's words:

"Gray, worthy friend, is all philosophy
And green and fresh life's golden tree."

We can point to actual practical achievements in the field of present day biological bibliography, like the great compilation on *Infantile Paralysis* by Fishbein and Salmonsen,[11] which includes more than 10,000 references, or the Donner Foundation's *Index to the Literature on Experimental Cancer Research,*[12] a heavy tome of over 1,000 pages.

How have the seemingly unsurmountable obstacles been overcome? This is what we have found to be true *in praxi*:

1. Machines

To say it forthwith, at the present time, machines cannot be considered a solution of our problems. The machine can never produce anything but the information which has been fed into it. A coverage of all subjects from the angles of every possible approach seems impossible. Even if it were feasible it would be much more costly than the preparation of subject bibliographies as they are required.

I certainly do not agree with the thesis propounded as early as 1877 that "more bibliographical work is being done piecemeal than would be necessary, if properly coordinated, to produce a universal index."[13] The availability of machines does not change, in my opinion, the incorrectness of that statement.

Furthermore, "even the most advanced mechanical brains show little sign of equaling the analytical capacities of their masters . . . The more intricate and intriguing the subject information, the longer will that analysis remain unmechanized."[14] The most ambitious machine project in our field, an experimental project, is that of the Biological-Chemical Coordination Center of the National Research Council in Washington which can pinpoint information on the biological effects of chemicals; it uses IBM machines *plus* a good deal of human brainwork.

2. Indexes and Abstract Journals

Dr. Claudius F. Mayer, one of the great medical bibliographers, has this to say: "The so-called abstracting journals are very convenient indicators, first-aid tools in a quick approach . . . They are not more than indicators to be used with proper criticism. The information that they convey should never be accepted without an ultimate recourse to the original sources."[15] No self-respecting bibliographer will ever list references on the basis of an index or abstract journal alone. No matter how long the bibliography, he will either see and check every item in the original, or clearly indicate that he has not done so for a certain special reason and will then list the source where the quotation was seen. Any other course would be unethical and, in the long run, would seriously hurt our professional reputation and standing.

Dr. Fulton tells a story concerning a certain Mr. Routh of Oxford who at the ripe old age of 99 years was asked by a younger man for some precept which guided his career. Routh's laconic reply was: "Always verify your references."[16] Among the most important reasons for checking the original is the fact that all abstract journals are slanted, and rightly so, according to the interest of the group for which they are published. The medical bibliographer who has used *Chemical Abstracts* will find this justified bias, even as the chemical bibliographer using *Botanical Abstracts*.

To what extent, then, should the bibliographer cover abstracting journals and indexes? Should he try to check in every case as many of them as possible, i.e., in the case of a bibliography on digitalis, should he go to *Chemical Abstracts, Current List of Medical Literature, Index Catalogue, Excerpta Medica, Herbage Abstracts, Biological Abstracts, World Abstracts of Medicine and Surgery, Veterinary Bulletin, British Abstracts, Zentral Blätter*, etc., etc., *ad infinitum*? Even if the bibliographer did all this he still would not have achieved anything like complete coverage.

Dr. Mayer estimates the coverage of the scientific literature by abstracting journals as 20 per cent,[18] an estimate borne out by the figures on the present coverage of medical literature by the *Current List*, 1,425 out of 7,500 journals received by AFML.

This fact is complemented by another one: Approximately half the requests in research libraries come as a result of bibliographical notes in the literature rather than as a result of consulting indexes.[19] Here, then, is the clue leading to the solution of the basic bibliographic problem of assembling references.

3. Snowballing of References

On the basis of experience with several large bibliographies, the snowballing principle seems to be the most economical and most reliable way to achieve complete coverage. Let me say here parenthetically that, in setting ourselves the task of making a "complete" bibliography, our aim must be directed at completeness in the main field *only*, and at representative listings in background fields.

There should not be any illusion as to anyone's ability to make a *really* 100 per cent complete bibliography; this is as much a Utopia as perfection in any other field of human endeavor. As Pope said: "Whoever thinks a faultless piece to see, thinks what never was nor is nor e'er shall be."

Near-completeness can be achieved in the following manner: After defining the scope, we begin by using just one index appropriate to the topic at hand. We may use instead several indexes, if possible, including a domestic and a foreign one, but we need not cover the same period, except for the last year or so, by more than one index.

Then, we proceed and follow up each suitable reference found in the material listed in these indexes, i.e., in the books, articles or papers themselves. These references should be checked and all suitable bibliographic material located therein, verified.

Hearing about this method for the first time, one may think it comparable to an avalanche rather than to a snowball. This, however, is not the case. Depending on the scope or the topic, one discovers soon enough the increasing duplication, and ultimately the subject is exhausted.

Of course, we cannot act like Agamemnon in Miss Hale's *Peterkin Papers*. As you remember, instead of going to school, he studied the encyclopedia, but got stuck on the second column of the first page, where he met with A as a note in music and was thereby led to study music which "required a long time" as Miss Hale says.

The snowballing method has to be used with intelligent discretion—a quality which machines do not possess. We can use clerical help to a considerable extent by marking suitable references with checks and by having the assistant search the growing file for previous inclusion of the references. Indeed, proper use of clerical help should result, on the basis of our statistics, in an almost equal division of clerical time and professional time.

While the snowballing method may appear to the uninitiated to be a hit-or-miss proposition, sufficient experience has been accumulated to show that it fulfills the main requirement of the practical bibliographer, it functions.

4. Presentation

Collecting the references is only part of the bibliographer's task; their proper presentation is equally important. An intelligent clerical assistant will be able, after proper instruction, to type all references directly from the source, i.e., the paper or book itself, not the abstracting or indexing journals, on slips, preferably 3 by 5 inches. The bibliographer will then annotate the slips. Annotations enhance the value of bibliographies in our field so tremendously that there is no excuse for undertaking any large project in bibliography and then presenting the material without annotations. The expenditure of time and money involved in the compilation is such, that it is economically indefensible *not* to annotate. These annotations will usually have to be descriptive; few of us will be well enough acquainted with any special field to prepare critical bibliographies.

5. Arrangement

For the arrangement of the references contained in any large list, chronological or subject arrangement supplemented by a name index are to be considered. Alphabetical arrangement should never be adopted for obvious reasons, plus the new complication that research teams which are doing an ever-increasing share of research work

choose to infuriate bibliographers and catalogers alike by constantly choosing another teammate as senior author. What yesterday was Tom, Dick and Harry, is today Dick, Harry and Tom, and tomorrow Harry, Tom and Dick. This means that an author list will *not* get the works of one author together.

In biology, classification presents again its own special problems: nature is full of transitions, whereas the basic principle of systematization is separation. The larger the groups are, the more transition we will have to cope with, therefore we classify as minutely as possible. (See chart.) We do our classifying as we go along collecting and annotating our material; and only when we have finished that task do we arrange the material in larger groups, if we see this can be done.

And for these tasks of annotating and classifying, we use experts to the greatest possible extent. "Although in our more cynical moments we may think or even speak disrespectfully of experts, it is only the more self-confident among us who imagine that we could get along without them." Indeed, in the complexities of biological bibliographies experts are a godsend.

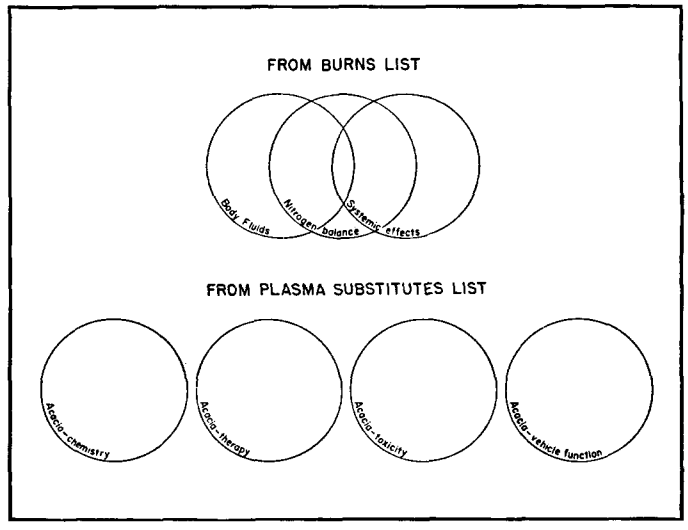
There is no need to have an actual board of consultants, which is helpful and very stimulating besides, but, an expert adviser is almost indispensable considering present-day specialization which leads us to knowing less and less about more and more and may logically have all of us end up knowing nothing about everything.

6. Compilations

Not all of us have occasion to compile large bibliographies for publication and even those of us who do will frequently be called upon to compile short reference lists.

The reason for limiting our discussion to large bibliographies is simply that the problems are essentially the same for all these compilations; they differ only quantitatively. We all know that cataloging difficulties increase in almost geometric proportion as the size of the catalog increases; the same thing is true of the catalog's first cousin, the bibliography. If we know how to prepare a large bibliography, a short one should present no difficulties. A few mechanical problems inherent in the preparation of large files and the need of preparing final copy for the printer are peculiar to the large bibliography, but they do not differ on the basis of the subject field covered and therefore need not concern us here.

In conclusion, let me raise my Cassandra voice against the practice of call-



ing a short list based, let us say, on checking two or three volumes of the *Biological Abstracts* or *QCIM* a "selected bibliography." The verb "to select" means, according to Webster, "to take by preference from among others; to pick out, to cull." By picking out an index close at hand and copying from it a few references, we have certainly not applied a true principle of selection; as a matter of fact, we should leave this copying job to a clerical assistant. We shall not get anybody outside our profession to recognize that kind of work as professional; by doing it, we shall hurt our professional interest. I suggest that for this work, too, a modified snowballing method should be given the most serious consideration. Any bibliography, even the smallest one, should live up to Dr. Osler's opinion of a good bibliography: it should be "a thing of beauty and a joy forever," even if it is not a prearranged "float through posterity."[20]

Social Sciences Documentation

Dr. Harold Lancour, associate director of the University of Illinois Library School, has been elected to a four year term as a co-opted member of the UNESCO sponsored International Committee for Social Sciences Documentation. Dr. Lancour is the only American among the twelve members of this major international bibliographical body.

The Committee has for its object the development throughout the world of bibliography and documentation in the social sciences. Since its establishment in 1950 it has been instrumental in starting two important publications: *The International Political Science Abstracts,* and *Current Sociology.*

These publications are bi-lingual, in English and French, and are produced under the editorship of Jean Meyriat, librarian of the Fondation Nationale des Sciences Politiques in Paris. They are issued quarterly by UNESCO and are distributed in the United States through Columbia University Press.

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6 Taken from H. J. T. Ellingham. A chart illustrating some of the relations between the branches of natural science and technology. In: The Royal Society of Scientific Information Conference, 1948 (RSIC 1948). London, 1948. Following p. 480.

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9 Listed in O. Glaeser. *Roentgen.* Springfield, 1934. p. 422-479.

10 D. J. Urquhardt. "The organization of the distribution of scientific and technical information." RSIC 1948, p. 524-527.

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18 C. F. Meyer, loc. cit.

19 W. H. Hyde et al. "Criteria for the selection of periodicals in a science library." *News Sheet, Pure and Applied Science Section, ACRL.* 1953, 2:no. 3, p. 6.

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*Alphabetic Listing in a Pharmaceutical Library**

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FOR NEARLY twenty-six years the Squibb library has maintained a cumulative subject index to books, pamphlets, technical papers and patents in the fields of pharmacology, chemistry, bio-chemistry and related subjects. At present, including title cards for books and pamphlets, this file contains approximately 500,000 cards. Exclusive of cataloged material, about 220 items are indexed for this file each week. These indexed items include 180 journal papers, taken from about 425 journals and 40 patents. Since each item has approximately three subject headings, this means that 660 subject cards are added weekly.

In addition, the library maintains a card file known as the Proprietary File which gives proprietary, generic and other nondescriptive names of drugs. Together with an older mimeographed list, this file now contains about 20,000 items. To it are added, almost entirely from the Pharmaceutical Section's *Unlisted Drugs*,[1] about 160 items each month. Each entry is assigned an index heading under which literature references to the drug in question are to be found in the subject file. In recent years, cross references from these subject headings to the drug names have been filed in yet a third file. In this way, all proprietary or generic names for a given drug may be quickly located and an index is provided also to drugs found in advertisements or the like about which little or no information ever appears in the technical literature.

The Proprietary File is designed to provide all available information about drugs, past, present and future, their patent status, chemistry, manufacture, pharmacy, pharmacology and therapeutic use. A drug, in the words of the Pure Food and Drug Act, is ". . . *any substance or mixture of substances intended to be used for the cure, mitigation or prevention of disease of either man or other animals.*" This obviously may include anything from a simple hydrocarbon such as *cyclopropane* to the most complex proteins such as ACTH, to say nothing of the heterogeneous mixtures so popular at the moment.

Besides furnishing or giving the key to complete information on known drugs, the files are expected to help answer such questions as "Is there likely to be a patent application pending on Compound X?" or "What is the real composition of the drug which Y Company has distributed under the following chemical-sounding (but nonsensical) name . . .?" They must even on occasion provide the basis for an informed guess as to the nature of the drug Company Z or Doctor A is rumored to have developed for the treatment of hypertension.

In order to answer these and other questions, all information on a given drug must be in one easily located place, with a minimum use made of cross references.

How is this to be done in the case of, for example, mephenesin? In addition to this so-called generic name, the compound may appear as a structural formula with no name attached or under or more equally accurate chemical names—3-(o-toloxy)-1,2-propanediol, 3-(2-(methylphenoxy)-1,2-propanediol, α-(o-tolyl) glyceryl ether, $\alpha\beta$-dihydroxy-γ-(2-methylphenoxy)-propane and, conceivably, since anything is possible in chemical nomenclature, o-(β,γ-dihy-

* Presented at the 44th Annual Convention of the Special Libraries Association in Toronto, Canada, June 22-25, 1953.

droxy-propoxy)toluene or β,γ-dihydroxypropyl o-methylphenyl ether, to say nothing of two or three experimental numbers and thirty or more trade names, including, of course, the Squibb trade-mark, *Tolserol.*

Choosing A Name

Are we to choose the Squibb trade-mark; the generic name, which was coined some time after the drug was introduced; the name under which it was first introduced as a drug in England, *Myanesin;* or one of the chemical names? And, in the last case, which one? And are we to make cross references from each of the possible chemical names as well as each trade name and experimental number?

Our answer to this question insofar as pure chemicals are concerned is to use the *Chemical Abstracts* index name, 3-o-toloxy-1,2-propanediol. *Chemical Abstracts* itself provides any necessary chemical cross references; the Proprietary File provides cross references from all nonchemical names and experimental numbers; and all publications on *Tolserol* as such are given added entries under a Squibb products heading. This choice has several advantages: not only does it provide an accurate name which corresponds to the structural formula and any conceivable correct chemical name but it puts this particular drug under the same heading as all competitive products and at least some of the related drugs which have the same physiologic action. Furthermore, it seems much easier to remember without referring to an authority that *Myanesin,* mephenesin and *Tolserol* are 3-o-toloxy-1,2-propanediol than to recall under which of the three a chemical name or any of its various synonyms should be indexed. When one indexes a large number of compounds, it is a great time-saver not to have constantly to consult an authority.

In order to arrive at the proper index name, we apply the principles of the introduction to the 1945 *CA* subject index (to which paragraphs cited here refer).[2]

Because the Squibb files antedate the codification of these principles by many years, and because these principles are changed in minor respects with each annual *CA Index,* as well as for other reasons, there are numerous differences between the Squibb files and *CA.* Frequently the rules are not sufficiently explicit so that they must be amplified, as in the naming of nonprimary amines, for example (par. 234), using any recent annual index as a guide. Further, at Squibb, any given compound is indexed under only one heading, rather than as in *CA,* which uses a "preferred" heading and one or more daggered entries (par. 72).

Neither have we adopted the *CA* institution of the asterisked entry (par. 2g) for an author's name, which may or may not be an "extra" entry. Thus in the *CA 1951 Index* under *8-Azaguanine*—a peculiar quasichemical name in which the oxa-aza nomenclature is applied to ring system already containing four ring nitrogen atoms, there may be found ten references. Under *Guanazolo,* a sort of pet name for the same compound, there may be found five of these references plus an additional reference. And finally, under *1H-v-Triazolo[d]pyrimidin-7-ol, 5-amino-,* the chemical index name corresponding to the probable structure of all three, may be found these eleven references plus five additional ones. Nor is there any cross reference, even in the formula index, to indicate that any one of these is not the only entry. At Squibb, the Proprietary File shows this chemical index name for both 8-azaguanine and guanazolo and all material in the subject file is under the chemical name. In order to achieve this, it is often necessary to make more or less unwarrantable assumptions, not to say guesses, but since we are not responsible to a large number of users, little harm is done should we guess wrong. In any case, if guanazolo should turn out to be identical with 8-azaguanine, it would be easy enough to change the cards in the subject file.

In order to cope with year-to-year changes in *CA* usages, some cross references are used. Thus if *CA* uses *Biacetyl* in 1946, and switches to *2,3-Butanedione* in 1947, a cross reference is made from the latter to the former. This is usually done only in the cases which arise most frequently. If *CA* changes a radical name, e.g., benzohydryl in 1946, to benzhydryl in 1947, we are ordinarily unable to change.

Index Headings

In a few areas, index headings for the pharmaceutical library differ wholly from those of *CA*. This is true, for example, of heterocyclic derivatives of sulfonamides and synthetic estrogens of the stilbestrol type, in both of which cases our principles were outlined before the *CA* indexes had settled, so to speak. We have also made an effort, not always successful, to systematize the indexing of steroids, which *CA* has pretty much given up as a bad job (par. 411-413). For each of these, our own authority lists have been prepared and cross references made for specific compounds.

Another departure at Squibb, is the lack of differentiation, ordinarily, among structural and optical isomers as well as amine salts and even esters of commonly used complex drugs. This is because investigators, particularly clinical investigators, are rarely very clear as to the exact form of the drug they are using, and an attempt to differentiate in indexing would result in scattering. In a few cases, such different forms are shown as a sub-heading which is ignored in filing; thus entries on cortisone and its acetate and on the numerous forms of penicillin are interfiled.

In the last analysis, while *CA* index headings may frequently be used, the Squibb subject index serves as its own authority. If there are no entries in the Squibb file under a proposed index name or an analogous one, investigation is in order. If the drug is apparently an old one and there is no cross reference, as is the case when we differ radically from *CA* principles, the proposed index name is checked against the rules to determine whether it has been named correctly. If the drug proves to be a new one, a name conforming to the rules may be safely used.

It is true that this practice sometimes results in extremely clumsy subject headings. Organic chemistry is not a spoken language. It is also difficult to remember. In such cases, after patents and preliminary papers have been collected and the drug is apparently established, it is expedient to change to a simpler name. This is usually the name under which the drug is most commonly known, whether a generic name, a pharmacopeial name or a trade name. If the cards already collected are not too numerous, the subject headings are simply changed on the cards themselves and a cross reference is made. If such a change is impracticable, dated cross references are made: e.g. *"Barbituric acid, 5-ethyl-5-phenyl-*. For references after 1942, see *Phenobarbital,"* and vice versa. However, if the chemical heading is a relatively simple one and easy to remember, we tend to retain it indefinitely.

Drugs, like empires, wax and wane. They are born, they flourish and they disappear. Sometimes they reappear like comets and again excite the enthusiasm of newspaper reporter, advertising men and even drug manufacturers. We may become aware of them at almost any stage of their career. Their Indexing must be adapted accordingly.

First, there are the drugs of the future. These are the embryonic drugs which first appear among a series of analogs in a chemical paper, a collection of products hopefully covered by a patent, a long list of compounds tested routinely for cancer therapy or some other use, as like as not to be found useful for something entirely different. Sometimes there is a clue to their possible future uses; more often there is none. A recent example is isonicotinic acid hydrazide, prepared, incidentally, in 1912, and found useful in tuberculosis forty years later. No indexing or-

ganization, certainly not a small library, can hope to catch all of these; but by judicious use of broad headings, the application of imagination, and a large proportion of luck, at least some of them can be indexed in their early stages.

Case History

A case history of a drug introduced as a chemical, the analgesic now known as *Dromoran,* is as follows:

December 1, 1948: Swiss patent covering the compound and noting that it shows activity similar to that of morphine. Called 1'-methylpiperido [2',3',4'-:9,14,13]-3-hydroxy-5,6,7,8,9,10,13,14-octahydrophenanthrene (fortunately with a structural formula!). Duly indexed under *10,4a(4)-Iminoethranophenanthren-6-ol, 1,2,3,9,10,10a-hexahydro-11-methyl-1.*

March 1949. Paper in *Helvetica Chimica Acta.* Described as clinical analgesic. Called hydroxy-N-methylmorphinan.

March 1949. Paper before the American Society for Pharmacology and Experimental Therapeutics reported in *Federation Proceedings.* Described as potent analgesic in human subjects. Called 3-hydroxy-N-methylmorphinan-HBr (NU 2206).

June 1950. Paper in *Journal of Pharmacology.* Results of animal studies. Called 3-hydroxy-N-methylmorphinan (*Dromoran*).

July 1950. Paper in *Journal of Thoracic Surgery.* Used as analgesic in thoracic surgery. Called by same name.

September 1950. Paper in *Anesthesiology.* Called 15431.

October 10, 1950. U. S. patent covering this and similar compounds, said to have morphine-like properties. Named as in Swiss patent.

November 3, 1951. *Journal of the American Medical Association* reports adoption of methorphinan hydrobromide as a generic name for *Dromoran.*

1952. Numerous papers on the use of *Dromoran* as analgesic. Like the above references, all these are indexed under the chemical subject heading.

April 1953. All concerned tire of trying to remember (or looking up) chemical name. Subject cards and all Proprietary File cross references changed to *Dromoran.*

A more usual sequence of events is for a drug to be reported first with experimental or clinical data. Sometimes the constitution of these compounds is unknown, or indeed nearly unknowable. An example is *Terramycin,* first reported as a promising antibiotic in January 1950. In July 1952, after several hundred papers on its bacteriostatic action, pharmacology and therapeutic use, its constitution was elucidated. In October 1952, the not very descriptive name oxytetracycline was proposed and this has since been adopted as the generic name. In the Squibb files it is still known as *Terramycin.*

A parallel case is the antibiotic of then unknown structure, first reported under the name *Chloromycetin,* a registered trade-mark, and almost immediately thereafter synthesized and shown to be a relatively simple compound. Some months and many papers later, it was given the generic name chloramphenicol, necessitating a card in the Proprietary File. Further, after some hesitation, *CA* decided to index under the chemical name so that a cross reference from that heading was required in our file.

Even when the constitution of the drug is known, its sponsors may not necessarily wish to reveal it, so that the name which follows the phrase "known chemically as . . ." is not always transparently clear. In addition to such minor red herrings as "o-hydroxybenzamide" for salicylamide, or, after Beilstein, "thiodiphenylamine" for phenothiazine, considerable ingenuity is often expended in constructing "chemical names" which, while strictly accurate, are far from adhering to the Geneva rule.

Thus a drug is announced, complete with typographical error and, of course, no "picture," as "N,N-dimethyl 4-piperdylidene 1,1 diphenyl methane methyl sulfate" [4-benzhydrylidene-1,1-dimethylpiperidinium methyl sulfate] or "epoxytropine tropate methylbromide," a "new drug" which on scrutiny reveals itself to be, at least probably, scopolamine methobromide, known under that name since 1904. It would be quite easy to construct a systematic name for penicillin G very much in accordance with *Ring Index* and *CA* rules, 6-benzamido-3,3-dimethyl-2-oxo-4-thia-1-azabicyclo [3,2,0] heptane-2-carboxylic acid, and perhaps introduce it as a new antiinfective agent.

Natural products, alkaloids, glycosides, vitamins, proteins and the like, are indexed for the most part under common names, usually those used by *CA*: insulin, mescaline, tuberculin. When such a compound has two equally common names, g-strophanthin = ouabain, one is chosen and a cross reference made from the other. When such compounds are first introduced, that is, when they cannot be found in the Squibb files, in *CA* or in the usual sources, the author's name is used. In the frequent cases when two such names are suspected of referring to the same substance, *see also* references are made. When the identity is proved, one of them is changed. Vitamins are indexed under their usual clinical names rather than those used in *CA*: thiamine, ascorbic acid, riboflavin. Glandular substances are indexed from the gland from which they derive: *Pituitary, anterior growth hormone. Adrenal exts., cortical.*

Indexing Mixtures

Alphabetic indexing is perhaps least suited to the indexing of mixtures. There are many mixtures, and in handling them, it becomes necessary to follow a procedure described in legal language as "cy-pres," which, applied here, means selecting the best heading possible when *any* listing is dubious. Relatively homogeneous mixtures are easy to index. Mixtures of antibotics or sulfonamides are indexed under: *Antibiotics, mixed* or *Sulfonamides, mixed* with the individual components following in alphabetic order. Vitamin mixtures, which may contain up to twenty or so ingredients, are indexed simply as *Vitamin prepns.* Mixtures of only two active ingredients are usually indexed in alphabetic order, regardless of the amounts of each ingredient or of the relative specificity of each to the purpose for which the mixture is intended; thus, *Estradiol. Prepns. contg. testosterone.* By this means, it is possible to find all material in the Squibb files on any specific market preparation containing these two drugs, all information on estradiol, and most information on preparations containing estradiol and one other drug. It is not, however, possible to find all information on all mixtures containing testosterone. If circumstances seem to warrant, cross references are made of the type: *Testosterone. Prepns. contg. estrogens.* See the individual estrogen. Prepns. contg. testosterone.

In multiple mixtures, that component is chosen which seems most specific to the purpose indicated. A mixture containing stilbestrol, phenobarbital, two plant extracts and thiamine hydrochloride, and obviously intended for estrogenic therapy, is indexed simply under: *Stilbestrol. Prepns.* Sometimes the choice of a suitable heading is a matter for flipping a coin. Fortunately most such shotgun remedies do not appear in the research literature except in reports on mixtures with proprietary names, the indexing of which is shown by the Proprietary File.

As if these complications were not enough, the worker in pharmaceutical literature must also cope with medicine, bacteriology, botany and other subject fields.

Medical terminology has a richness of synonyms which would put Sanskrit to shame. Every malady, every symptom, every part of the body has several names in English alone. Since in the Squibb files, the therapeutic use of all drugs in a given disease is indexed not only under the drug, but, at least on its first appearance also under the disease, a standard is required. For this purpose, we use the *Quarterly Cumulative Index Medicus Subject Headings and Cross References.*[3] Since this by no means contains all possible cross references a medical dictionary is a necessary adjunct. For example, to find the correct subject heading for Saturday night paralysis it is necessary to consult Dorland, where we find "see Sunday morning paralysis." This in turn is defined as "musculospiral paralysis . . . in persons who have fallen asleep after a debauch." Under *Paralysis, musculospiral* in the subject heading list we find

"See *Paralysis, radial.*" Fortunately, not all cross references are so circuitous. Occasional changes and additions are made, either from the most recent volume of *QCIM* or from a consideration of the recent literature; for example, for cat scratch disease, indexed in the most recent *QCIM* simply under *Cats*, we have added *"See Lymph node diseases."*

Bacteriology, though perhaps less given to fantasy in nomenclature than medicine, is not without its flights. A microorganism, particularly when one considers foreign as well as U. S. literature, may have many names: thus, the bacterium known as *Escherichia coli*, and usually so called in this country, is usually *Bacillus coli* or just *B. coli* in England, *Bacterium coli or Colibacillus* in Germany, and for the most part, *colibacille* in France. As a standard, we rely on *Bergey's Manual of Determinative Bacteriology*[4] which indexes organisms under the specific rather than the generic name and so is easy to use.

In the occasional case when an author uses a name which might refer to more than one organism, e.g., *Bacillus lactis*, which might be either *Bacillus cereus*, or *Bacillus brevis*, the author's name must be used in quotes. Sometimes, particularly in French, a good reference book or an elastic imagination is required to interpret some of the more poetic pet names: "gilded staphylococcus" (*staphylocoque doré*) is not too hard to recognize as *Staphylococcus aureus*, or rather, *Micrococcus pyogenes aureus*, but what looks like "charcoal bacillus" (*bacille du charbon*) is not quite so obviously *Bacillus anthracis*. It might be added that the *QCIM* list which lumps all bacteria under *Bacteria*, bears little resemblance to Bergey's nomenclature.

Plants as far as possible are indexed under the preferred name of *Standardized Plant Names*.[5] This lists not only less suitable botanic names but also common names of plants and plant products, although only those in American commerce or use. Beyond its scope, the international confusion in botanic nomenclature is allowed to reign. Very common plants such as fruits, vegetables and many trees, rarely if ever called by their scientific names, are indexed under the common name with no cross reference. Many drug plants are indexed under the common name, but since their Latin names also appear often in the literature, a cross reference from the latter is made: garlic from *Allium sativum*; rhubarb from *Rheum sativum*.

So far only main headings have been discussed. To cover the apparatus of subheadings would take too long and in any case, indexers usually prefer their own. The system at Squibb is designed for a card file, rather than for a more easily scanned printed index. For this reason we have authority lists of standard subheadings to be used under the names of drugs, microorganisms, diseases, routes of administration and the like. This makes it possible to index the same kind of material always in the same place.

To summarize, the Squibb system was developed in its own pharmaceutical library to serve the needs of the organization. Its methods may be useful to other literature workers. At any rate, the problems of an indexer are always interesting to another indexer.

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[4] Robert S. Breed, E. G. D. Murray, and A. Parker Hitchens. *Bergey's Manual of Determinative Bacteriology.* 6th ed. Baltimore: The Williams & Wilkins Co., 1948.

[5] American Joint Committee on Horticultural Nomenclature. *Standardized Plant Names.* 2d ed. Harrisburg, Pa.: The Committee, 1942.

A Selected List of Books for the PHARMACEUTICAL INDUSTRY*

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Because the pharmaceutical industry draws from many fields, its interests are diversified. In attempting to select a list of books, one must necessarily choose not only those in chemistry, biology, medicine, pharmacy and related subjects, but also those concerned with the nontechnical aspects of the industry as well.

The selected list does *not* include indexes to the literature, abstract journals, annual reviews, serial publications, general reference works, or dictionaries. An excellent listing of these may be found in the appendix of *Technical Libraries*, edited by Lucille Jackson and published by Special Libraries Association. Dictionaries may be selected from J. E. Holmstrom's *Bibliography of Interlingual Scientific and Technical Dictionaries.*

Since there are thousands of books from which to make a choice, difficulty exists in narrowing the selection to approximately one hundred and fifty items. The intent, here, has been, primarily, to indicate some useful publications of fairly recent date, and to include also some of the basic books. From the many useful and informative books in the field of organic chemistry, only a few have been listed.

Continued advances in knowledge and the publication of new books make the revision of any selected book list imperative. The highly specialized interests of various pharmaceutical companies further complicates the choice to be made in selecting a single, basic list.

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AN INTRODUCTION TO THE HISTORY OF MEDICINE. By *F. H. Garrison*. 4th ed. Philadelphia: Saunders, 1929.

HISTORY OF PHARMACY. By *Edward Kremers* and *G. Urdang*. Philadelphia: Lippincott, 1951.

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IMMUNITY, HYPERSENSITIVITY AND SEROLOGY. By *Sidney Raffel*. New York: Appleton-Century-Crofts, 1953.

ORAL VACCINES AND IMMUNIZATION BY OTHER UNUSUAL ROUTES. By *David Thomson* and *Robert Thomson*. Baltimore: Williams & Wilkins, 1948.

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INDUSTRIAL TOXICOLOGY. By *Alice Hamilton* and *Harriet L. Hardy*. New York: Paul B. Hoeber, 1949.

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INORGANIC PHARMACEUTICAL CHEMISTRY. By *Charles H. Rogers, Taito O. Soine* and *Charles O. Wilson*. 5th ed. Philadelphia: Lea & Febiger, 1952.

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MARKETING HANDBOOK. Edited by *Paul Nystrom* and *Wilbert W. Frey*. New York: Ronald Press, 1953.

MEDICAL PHYSICS

MEDICAL PHYSICS. 2 Vols. By *O. Glasser*. Chicago: Year Book, 1944-1950.

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TEXTBOOK OF MEDICINE. Edited by *Russell L. Cecil* and *Robert F. Loeb*. Philadelphia: Saunders, 1951.

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BERGEY'S MANUAL OF DETERMINATIVE BACTERIOLOGY. Edited by *Robert S. Breed, E. G. D. Murray* and *A. P. Hitchens*. 6th ed. Baltimore: Williams & Wilkins, 1948.

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ATLAS OF MEDICAL MYCOLOGY. By *Emma S. Moss* and *Albert L. McQuown*. Baltimore: Williams & Wilkins, 1953.

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HANDBOOK OF NUTRITION. Council on Foods and Nutrition, American Medical Association. Philadelphia: Blakiston, 1951.

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TEXTBOOK OF OPHTHALMOLOGY. By *S. R. Gifford* and *F. H. Adler*. 5th ed. Philadelphia: Saunders, 1953.

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THE HANDBOOK OF SOLVENTS. By *Leopold Scheflan* and *M. B. Jacobs.* New York: D. Van Nostrand, 1953.

QUANTITATIVE ORGANIC MICROANALYSIS. By *Al Steyermark.* Philadelphia: Blakiston, 1951.

SYNTHETIC ORGANIC CHEMISTRY. By *R. B. Wagner* and *H. D. Zook.* New York: John Wiley, 1953.

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DISEASES OF THE NOSE AND THROAT. By *Sir St. Clair Thomson* and *V. E. Negus.* New York: Appleton-Century-Crofts, 1949.

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CLINICAL PARASITOLOGY. By *Charles F. Craig* and *Ernest Carroll.* 5th ed. Philadelphia: Lea & Febiger, 1951.

PATHOLOGY

COLOR ATLAS OF PATHOLOGY; HEMATOPOIETIC SYSTEM; RETICULO-ENDOTHELIAL SYSTEM; RESPIRATORY TRACT; CARDIOVASCULAR SKELETAL SYSTEM. U. S. Naval Medical School. Philadelphia: Lippincott, 1950.

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QUANTITATIVE PHARMACEUTICAL CHEMISTRY. By *Glenn L. Jenkins, Andrew G. DeMez, John E. Christian* and *George Hager.* New York: McGraw-Hill, 1949.

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PHARMACOLOGY IN CLINICAL PRACTICE. By *Harry Beckman.* Philadelphia: Saunders, 1952.

HANDBOOK OF MATERIA MEDICA, TOXICOLOGY AND PHARMACOLOGY. By *Forrest R. Davison.* St. Louis: Mosby, 1949.

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REMINGTON'S PRACTICE OF PHARMACY. Edited by *E. Fullerton Cook* and *Eric W. Martin.* Easton, Pa.: Mack Publishing Company, 1951.

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THE OFFICIAL PREPARATIONS OF PHARMACY. By *Charles O. Lee.* St. Louis: Mosby, 1953.

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STATISTICAL METHOD IN BIOLOGICAL ASSAY. By *D. J. Finney.* New York: Hafner, 1952.

STATISTICAL METHODS FOR CHEMICAL EXPERIMENTATION. By *W. L. Gore.* New York: Interscience, 1952.

QUALITY CONTROL AND STATISTICAL METHODS. By *Edward M. Schrock.* New York: Reinhold, 1950.

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THE SULFONAMIDES AND ALLIED COMPOUNDS. (ACS Monograph No. 106). By *E. H. Northey.* New York: Reinhold, 1948.

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PHARMACOLOGICAL BASIS OF THERAPEUTICS. By *L. Goodman* and *A. Gilman.* New York: Macmillan, 1941.

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CLINICAL TROPICAL MEDICINE. By *R. B. H. Gradwohl, L. B. Soto* and *O. Felsenfeld.* St. Louis: Mosby, 1951.

TUBERCULOSIS

DIAGNOSTIC AND EXPERIMENTAL METHODS IN TUBERCULOSIS. By *H. S. Willis* and *M. M. Cummings.* Springfield, Ill.: Thomas, 1952.

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THE KIDNEY; MEDICAL AND SURGICAL DIS-

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MECHANISMS OF UROLOGIC DISEASE. By *D. M. Davis.* Philadelphia: Saunders, 1953.

VETERINARY MEDICINE

DISEASES OF POULTRY. Edited by *H. Biester* and *L. Schwarte.* 3rd ed. Ames: Iowa State College Press, 1952.

DISEASES OF THE SMALL DOMESTIC ANIMALS. By *O. V. Brumley.* Philadelphia: Lea & Febiger, 1948.

MANUAL OF VETERINARY CLINICAL PATHOLOGY. By *D. L. Coffin.* 3rd ed. Ithaca, N. Y. Comstock Publishing Associates, 1953.

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THE VITAMINS IN MEDICINE. By *Franklin Bicknell* and *Frederick Prescott.* 3rd ed. New York: Grune & Stratton, 1952.

VITAMINOLOGY. By *Walter H. Eddy.* Baltimore: Williams & Wilkins, 1949.

THE VITAMIN B COMPLEX. By *F. A. Robinson.* New York: John Wiley, 1951.

Pharmaceutical Section: Publications

LORENA E. KEYL, *Assistant Librarian*
The Upjohn Company, Kalamazoo, Michigan

COPNIP List

The first issue of *COPNIP List* was published in September 1953. The *COPNIP List,* a quarterly publication, lists the current informational pamphlet material issued by manufacturers in the pharmaceutical and related industries and by organizations such as trade associations or foundations supported by them. Popular as well as technical material is included.

The *COPNIP List* is published quarterly by the Committee on Pharmacomedical Non-Serial Industrial Publications. Chairman Mollie G. Weller, librarian of Stine Laboratory of E. I. DuPont de Nemours and Company, is assisted in this project by Ruth Mishnun of Squibb Institute for Medical Research, Katherine C. Owen of Winthrop-Stearns, and Lorena E. Keyl of The Upjohn Company.

Annual subscription to *COPNIP* is $1. per year and includes an annual index giving author, company and subject listings. Subscriptions accompanied by a check and made payable to the Pharmaceutical Section, Special Libraries Association may be sent addressed to: Mrs. Katherine C. Owen, Winthrop-Stearns, Inc., 1450 Broadway, New York 18, New York.

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Union List of Periodicals in Pharmaceutical Libraries

The *Union List of Periodicals in Pharmaceutical Libraries* first appeared in October 1952. It gives the holdings of twenty-five pharmaceutical libraries in the United States and Canada and notes the location of approximately 1,500 journals. Periodicals in the fields of business and manufacturing, as well as in fields closely related to pharmaceutical interests are listed.

The new *Union List* was edited by Gertrude Bloomer, The Wm. S. Merrell Company, Cincinnati, Ohio. Assisting her on this project were Alberta L. Brown, The Upjohn Company; Mira Spinning, Bristol Laboratories; and Helen Loftus, Lilly Research Laboratories. The volume of almost 200 mimeographed pages is available at $3. a copy from: Miss Helen E. Loftus, Eli Lilly and Company, Indianapolis, Indiana.

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Unlisted Drugs

Unlisted Drugs, a monthly service published by the Pharmaceutical Section is the cooperative enterprise of a number of pharmaceutical libraries. It was established in January 1949 and describes new and current experimental and commercial products from American and foreign sources as they are reported in scientific journals.

Newly found names of drugs are considered "unlisted" and suitable for inclusion in *Unlisted Drugs* if they do not occur in the latest editions and supplements of the following standard sources: *Modern Drug Encyclopedia* and *Therapeutic Index* by Marion E. Howard; *Gehe's Codex; Repertorium Pharmazeutischer Special preparate, Sera und Impfstoffe,* edited by *Herbert Ludwig; Dictionnaire des specialités pharmaceutiques* by Louis Vidal; *British Pharmaceutical Codex; The Extra Pharmacopoeia* by William Martindale; *New and Nonofficial Remedies; U. S. Pharmacopoeia; British Pharmacopoeia;* and *International Pharmacopoeia.*

Annual subscriptions (for the calendar year only) are five dollars for twelve issues, with semi-annual indexes. Checks should be made payable to the Unlisted Drugs Committee. Subscriptions may be placed with: Miss Frances Stratton, Library, Lederle Laboratories Division, American Cyanamid Company, Pearl River, New York.

Pharmaceutical Library Notes

J. T. Baker Chemical Company

J. T. Baker Chemical Company maintains at its Research Laboratories in Phillipsburg, New Jersey, a monograph and periodical collection of over 8,000 volumes as well as files of patents and document series. Inorganic, organic and pharmaceutical chemistry is emphasized. This year J. T. Baker celebrates fifty years of service to science and industry in the manufacture of purity chemicals.

Frances E. Steele is research librarian and Dr. A. J. Barnard, Jr., director of Technical Information Service. This service edits *Chemist-Analyst*, a unique house organ, now in its forty-third year. It is indexed and abstracted by bibliographic services the world over. Only original research findings concerning analytical chemistry voluntarily submitted by scientists are published. Recent issues have circulated free-of-charge to over 40,000 individuals, libraries, and laboratories in over 60 countries.

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Baxter Laboratories, Inc.

The library maintained by Baxter Laboratories, Inc., Morton Grove, Illinois, has a functional arrangement which separates laboratory sciences from holdings in clinical medicine and business. During the past two years, the library has extended its services to the legal and foreign trade departments.

Extensive holdings of titles and fugitive materials in the areas of blood processing and transfusion, electrolyte and fluid therapy, organic chemistry and microbiology have been cataloged. Microcards are used for older reference titles, particularly foreign language titles. A Drug Index was begun in 1953, employing marginal punched cards; this index is now being correlated to a similar index for biochemical and synthetic organic compounds. The library publishes a monthly bulletin listing scheduled meetings and conferences, and a quarterly list of acquisitions.

In addition to the usual reference and circulation services, the library offers editorial services and provides translations of foreign scientific and economic articles.

MRS. IONE JOHNSON, *Librarian*

* * *

Ciba Company, Ltd.

An interesting feature of the Medical Library of the Ciba Company, Ltd., Montreal, is its dual language aspect. Both English and French are used intensively in preparing medical information for persons within the organization, and in answering queries received by members of the medical and allied professions. Other services rendered by this library include abstracting and translation as well as distribution of reprints to interested parties.

DOROTHY PHILION, *Librarian*

Wm. S. Merrell Company

The Wm. S. Merrell Company was formed in Cincinnati in 1828, and is one of the oldest pharmaceutical houses in the United States. The number of very old books in its library is proof of the emphasis the company has placed on research during its development.

The present library consists of approximately 8,500 volumes, of which somewhat more than one-half are bound journals. The library receives 240 current journals, and maintains a file of 10,000 patents and an extensive file of competitive literature. Research notebooks and progress reports are filed in the library.

All current journals are scanned for articles of interest to the company. A monthly report of the additions to the library's collection is sent to all department heads and group leaders. Each month a mimeographed annotated bibliography of articles on the common cold is prepared in the library and sent to interested persons both within and outside the Merrell organization. Literature searches and and translations are made by library staff members. A work room and an annex, which serves as an abstract and index section, have recently expanded the library's area.

GERTRUDE BLOOMER, *Librarian*

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Winthrop-Stearns, Inc.

The library of Winthrop-Stearns, Inc. publishes a weekly abstract bulletin that serves not only its own company but also the various ethical branches of the parent concern, Sterling Drug Inc., scattered all over the world except behind the Iron Curtain.

With the multiplicity of products and of varying trade names of the many interrelated companies, the library found it necessary some years ago to set up a catalog of all names used by the various companies, with cross references to the American products. In recent years, a far more extensive catalog of trademarked American and foreign drug products has been built up to answer inquiries about the composition and manufacturers of drugs. With the addition of items clipped from *Unlisted Drugs*, all fully cross indexed, this file is in constant use to answer both house and outside questions.

MRS. MILDRED P. CLARK, *Librarian*

* * *

Wyeth Institute

The library at Wyeth Institute of Applied Biochemistry has a complete annotated bibliography on HYALURONIDASE, by author and subject. This bibliography is kept up to date by supplements, issued quarterly in printed form. Anyone interested in obtaining copy should write to Gladys R. Phillips, librarian, Wyeth Institute of Applied Biochemistry, 900 North Broad Street, Philadelphia 30, Penna.

Institutum Divi Thomae

The Institutum Divi Thomae, named for its patron saint, St. Thomas Aquinas, is a graduate school of scientific research established in 1935 by His Grace, the Most Reverend John T. McNicholas, Archbishop of Cincinnati, with Doctor George Speri Sperti as co-founder and director. Its prospectus includes the investigation of fundamental problems in various fields of science; the establishment and the cooperative assistance of research laboratories at affiliated colleges, hospitals, and other institutions; and the consideration of science in its relation to philosophy.

The library of the Institutum is designed primarily as a working research library and for this reason emphasis has been placed upon obtaining complete files of the important American and foreign scientific journals. About one hundred forty-five scientific journals are received by subscription or exchange. The fields of physics, chemistry, biology, and experimental medicine are particularly well represented. The library consists of over 6,700 volumes, of which approximately 4,850 are bound journals. About 5,000 unbound reprints and pamphlets and some 850 lantern slides are available. The library is equipped with a microfilm viewer.

JANE E. BUXTON, *Librarian*

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Perfume Bottle Collection

John Russell Kennedy, associated with the Rexall Drug Company since 1913 and presently chairman of its Board of Directors, has spent over thirty years in developing a collection of perfume bottles which today numbers over 1,300 items. The bottles vary in size and examples of every known color in glass are to be found in the collection as well as many variations of intensity. Selected items from the collection were exhibited at the 1953 SLA Convention in Toronto.

MRS. ISABEL STAUFFER, *Librarian*

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Cancer Library Services

The comprehensive holdings of the American Cancer Society's Medical Library include a classified reprint collection from which items are available on loan for limited periods to interested persons.

A bibliographic service is available also to researchers, medical libraries and physicians. Bibliographies covering specific topics in this field are prepared by request on sufficient advance notice. Copies in bulk for use in meetings are supplied in certain instances.

Bound volumes of the collected reprints of American Cancer Society grantees are prepared by the library and distributed without charge, on a geographic basis, to a limited number of libraries throughout the U. S.

Further information may be obtained by writing to: Medical Librarian, American Cancer Society, 47 Beaver St., New York 4, N. Y.

MILDRED D. DONOHUE,
Medical Librarian

* * *

American Library in Paris

Dr. Ian Forbes Fraser, director of the American Library in Paris, will be the guest speaker at a meeting to be held Wednesday evening, March 3, 1954, at nine o'clock, in the lecture hall of the Carnegie Endowment for International Peace, 46th Street and United Nations Plaza, New York.

Dr. Fraser will describe the work being carried on by the American Library in Paris, how it serves a wide international public as a source of accurate and unbiased information about the United States, and how it helps to bring about greater understanding and closer friendship between France and America.

The Library has always been a private, non-governmental agency. It was established in 1920 by a group of American residents in Paris. The initial library collection consisted of books that had been contributed for the use of the American troops in World War I.

The enthusiastic response and continuing interest in this enterprise, currently the largest English language library on the continent, has brought about an extension of service through the establishment of seven provincial branches. Headquarters of the American Library in Paris is located at 129, Avenue des Champs Elysées.

Approximately 80 per cent of the Library's clientele is French. Circulation totals over 25,000 items monthly. Readers share a basic interest in all things American which is reflected in the wide subject range of the Library's holdings. Books and periodicals are selected to fill the particular needs of each region. Montpelier, university town and agricultural capital, has collections on medicine and public health, problems of irrigation and soil conservation, the organization of cooperatives, and other pertinent items. The branch at Roubaix, center of the textile industry, receives books in English and French on textiles, factory organization, housing and health of industrial workers, and receives also a large number of textile trade publications.

The Library has always depended on private support for its operation and the bulk of its resources comes from gifts of money, books and periodicals, sent by private individuals or firms in France and the United States. Anyone wishing to participate in this enterprise may obtain further information from the American Representative of the Library: Mrs. William B. Olmstead, Jr., 159 East 63rd Street, New York 21, N. Y.

FROM FOREIGN JOURNALS

KARL A. BAER

Following a pattern set in this country, German libraries have designated certain institutions as collecting agencies for literature in special fields. Pharmacy has been assigned to the Technische Hochschule at Braunschweig. Braunschweig is located in the British Zone and played host to last year's meeting of scientific librarians. Dr. Wolfgang Schneider read a paper on documentation in the field of pharmacy . . . French pharmacists have undertaken the publication of a "Repertoire permanent des specialités pharmaceutiques." This repertory will list all specialties which may legally be sold in France; it consists of 4 x 6" cards indicating manufacturer and properties of each product. The Repertoire began publication on 1 January 1953; cards are published irregularly as required by appearance of new drugs or modifications in composition, dosage, etc., of old ones. Subscriptions at 3.000 frs. available at C.N.O.P., Service de Documentation, 4 Ave. Ruysdael, Paris (8e) . . . Dr. Erik Waller, chief surgeon of the hospital at Linkoping, Sweden, and former member of the Association of Honorary Consultants to the Army Medical Library, donated his library consisting of more than 25,000 titles in the fields of early medical and pharmaceutical literature and medical history to the Carolina (Library of the University of Upsala). This library, containing mostly works published before 1800, is undoubtedly one of the most important collections of its kind. It is to be hoped that a printed catalog will be published in the not too distant future; such a catalog will constitute a most important contribution to medical bibliography . . . The November (1953) issue of the Library Association Record carries a boost for *Unlisted Drugs*. Mr. W. D. Pigott of Boots Medical and Scientific Libraries, Nottingham, England, mentions that the Boots Pure Drug Co., which receives this service, has all entries dry mounted on 5 x 3" cards and filed for quick reference. British pharmaceutical librarians also evidence interest in a project now in its preliminary stages, i.e., the idea of a joint abstract service of pharmaceutical libraries. Mr. Pigott states that "cooperation of pharmaceutical libraries in the United States has resulted in a high order of service." . . . A statement worth pondering over comes from one of our Swiss colleagues, Leo M. Kern: "A subject bibliographer must never have recourse to the extreme axiom, "Nothing or everything." He must be selective. Except in a few unusual cases, a bibliography is the result of decisions from which the subjective element cannot be removed." . . . Will the following facts help psychologists definitively to determine in which respect the English and our own national characters differ? In English libraries, the most stolen book is Gibbons' Stamp Catalog; here, it is the Bible. Tulsa, Oklahoma, reports eight copies missing in one year and we are even asked to believe the story of a defendant who, when asked why he stole 20 bibles, replied that he wanted to start a bible class.

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Russian Publications

Lange, Maxwell & Springer is pleased to announce that Captain I. R. Maxwell, M.C., of London, chairman of the company, is en route to Moscow for several weeks' stay, for the purpose of obtaining Russian publications.

All want lists should be rushed at once to Albert Daub, president of Lange, Maxwell & Springer's New York office at 122 East 55th Street, New York 22, N. Y., so that lists may be forwarded immediately to Captain Maxwell in Moscow.

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Deno Committee

Representatives from the Schools of Pharmacy, the Medical Library Association, and Special Libraries Association, form the Committee on Libraries of the American Association of Pharmacy. Members of the Committee met recently in Ann Arbor, Michigan, to discuss proposed plans for projects. Dr. Richard A. Deno heads the Committee which includes SLA members Winifred Sewell and Mrs. Irene M. Strieby.

CALENDAR

FEBRUARY 25-27
SLA Executive Board and Advisory Council Meeting. Chicago. Drake Hotel.

FEBRUARY 26
SLA Illinois Chapter. Chicago. Drake Hotel. Dinner Meeting.

MARCH 3
American Library in Paris. New York City. Carnegie Endowment International Center, UN Plaza at 46th Street. Dr. Ian Forbes Fraser, speaker.

MARCH 4
Washington, D. C. Chapter. American Association of University Women's National Headquarters. Meeting honoring President Keck. The Honorable Edward H. Rees of Kansas, speaker.

MARCH 5
SLA Philadelphia Council. Hotel Penn Sheraton. Banquet.

MARCH 8
SLA New Jersey Chapter. Plainfield, N. J. Park Hotel. Dinner Meeting honoring President Keck.

MARCH 9
SLA New York Chapter. Carnegie Endowment International Center. Meeting and Reception honoring President Keck.

MARCH 12
SLA Montreal Chapter. Le Cercle Universitaire. Dinner Meeting honoring President Keck.

MARCH 19
SLA Georgia Chapter. Marietta, Ga. Engineering Library. Lockheed Aircraft Corporation.

MARCH 22 - 24
American Congress on Surveying and Mapping. Washington, D. C. Shoreham Hotel. Annual Meeting.

APRIL 1-2
National Microfilm Association Convention. Cleveland, Ohio. Carter Hotel.

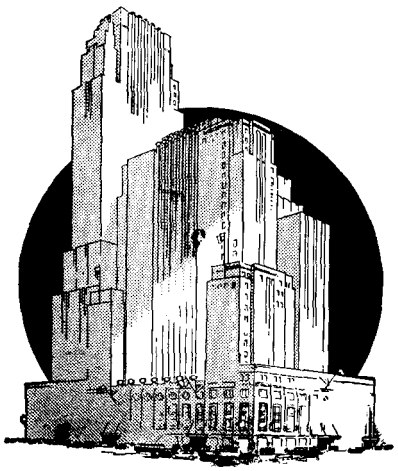
APRIL 3
SLA Philadelphia Council. Trip.

APRIL 8-9
Library Binding Institute. Washington, D. C. Statler Hotel. Annual Convention.

APRIL 22
SLA Pittsburgh Chapter. Annual Chapter Meeting.

APRIL 30
SLA Montreal Chapter. LaSalle Hotel. Annual Meeting and Banquet.

MAY 17-20
SLA Annual Convention. Cincinnati, Ohio. Netherland Plaza Hotel.



Netherland Plaza Hotel
Cincinnati, Ohio

SLA

Convention Headquarters

May 17-20, 1954